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Research Triangle Park NC 27711

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Emissions Inventory System/Area Source (EIS/AS) Test Run Series Documentation

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Emissions Inventory System/ Area Source (EIS/AS) Test Run Series Documentation

by

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Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
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Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

October 1980

I

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TABLE OF CONTENTS

LIST OF FIGURES v

ACKNOWLEDGEMENT viii

INTRODUCTION 1

EIS/AS TESTS

1. Create and Print the Emission Factor File 2

2. Create the Initial Master File Using NEDS Transactions . . . 19

3. Update the Master File Using EIS/AS Transactions 45

4. Produce a Formatted Dump of the Master File 84

5. Update the Master File Using EIS/AS Transactions 89

6. Submit Annual Report in NEDS Format 101

7. Retrieve a Standard Answer File Using the COBOL Language and Produce a Detailed Report of the Answer File 108

8. Submit Annual Report in EIS/AS Format. 134

9. Generate Internal Transactions and Update the Master File. . 137

10. Retrieve a Batched Answer File and Produce a Formatted Dump of the Answer File. 146

EIS/AS AD HOC TESTS

11. Generate All Non-Abortive Error Messages of the Emission Factor File Edit-Maintenance Program 152

12. Generate all Non-Abortive Error Messages of the Master File Transaction Edit Program. 157

13. Generate All Non-Abortive Error Messages of the NEDS to EIS/AS Master File Transaction Conversion-Edit Program . . . 164

14. Execute the Master File Emission Factor Transaction Generator Program and Store the Generated Transactions . . . 170

15. Exercise All Options of the Master File Internal Transaction Emission Factor Insertion Program. 173

16. Execute a COBOL Retrieval and Produce a Formatted Dump of the Answer File. 177

17. Execute an EIS/AS Retrieval and Produce a Detailed Report of the Answer File 187

18. Produce a Quick Look Report for County Data. 196

19. Produce a Quick Look Report for Particulate Emissions. . . . 226

20. Produce a Quick Look Pollutant Summary Report for the Criteria Pollutants 234

21. Produce a Quick Look Pollutant Summary Report for Six Pollutants 241

22. Execute the Retrieval Package and Produce a Quick Look Report from the Answer File 247

23. Execute the Retrieval Package and Produce a Batched Answer File and a Detailed Report of the File 256

24. Create the Official NADB Emission Factor File and Produce a Detailed Report 262

APPENDIX A: Cross-Reference of Tests, Procedures, and Programs . . . 267

LIST OF FIGURES

Figure Number	Title	Page Number
AST1-1	Emission Factor File Transaction Format	6
AST1-2	Emission Factor File Transaction Load Sheet	10
AST1-3	Run Stream	11
AST1-4	Sample Output	12
AST2-1	NEDS Area Source Transaction Formats	25
AST2-2	Option Card Format	35
AST2-3	Run Stream	36
AST2-4	Sample Output	37
AST3-1	EIS/AS Master File Transaction Formats	48
AST3-2	EIS/AS Master File Transaction Load Sheets	66
AST3-3	Run Stream	71
AST3-4	Sample Output	72
AST4-1	Run Stream	86
AST4-2	Sample Output	87
AST5-1	Run Stream	91
AST5-2	Sample Output	93
AST6-1	Run Stream	103
AST6-2	Sample Output	104
AST7-1	EIS/AS Retrieval Control Card	111
AST7-2	Definition of EIS/AS Retrieval Control Card Fields	112
AST7-3	Valid Retrieval Data Names	114

Figure Number	Title	Page Number
AST7-4	EIS/AS Retrieval Language Specification Fields	122
AST7-5	Definitions of EIS/AS Retrieval Language Specification Fields	123
AST7-6	Retrieval Specification Load Sheets	125
AST7-7	Run Stream	127
AST7-8	Sample Output	129
AST8-1	Run Stream	135
AST8-2	Sample Output	136
AST9-1	Run Stream	139
AST9-2	Sample Output	140
AST10-1	Run Stream	148
AST10-2	Sample Output	149
AST11-1	Run Stream	153
AST11-2	Sample Output	154
AST12-1	Run Stream	158
AST12-2	Sample Output	159
AST13-1	Run Stream	165
AST13-2	Sample Output	166
AST14-1	Run Stream	171
AST14-2	Sample Output	172
AST15-1	Run Stream	174
AST15-2	Sample Output	175
AST16-1	Run Stream	179
AST16-2	Sample Output	181
AST17-1	Run Stream	189

Figure Number	Title	Page Number
AST17-2	Sample Output	190
AST18-1	Quick Look Control Card Formats	198
AST18-2	Quick Look Control Card Field Descriptions	206
AST18-3	Data Element Abbreviations and Lengths	210
AST18-4	EIS/AS Quick Look Retrieval Load Sheet	218
AST18-5	Run Stream	219
AST18-6	Sample Output	220
AST19-1	Run Stream	227
AST19-2	Sample Output	228
AST20-1	Run Stream	236
AST20-2	Sample Output	237
AST21-1	Run Stream	242
AST21-2	Sample Output	243
AST22-1	Run Stream	251
AST22-2	Sample Output	252
AST23-1	Run Stream	258
AST23-2	Sample Output	259
AST24-1	Run Stream	263
AST24-2	Sample Output	264

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INTRODUCTION

The purpose of this manual is to document the EIS/AS test run series released by the Environmental Protection Agency, as part of the EIS/AS installation package. The test run series is divided into two major areas: basic test runs and ad hoc test runs. The basic test runs exercise each program in EIS/AS at least once and provide the user with a means of determining whether or not the installation of EIS/AS has been successful.

The ad hoc test runs further exercise the capabilities of the EIS/AS programs. The ad hoc test runs also provide the user with examples of how various combinations of EIS/AS programs may be used to generate certain reports or to accomplish special tasks. Any programs added to the original EIS/AS system are exercised by ad hoc test runs.

The EIS/AS User's Guide should be used as a reference in conjunction with this manual. Appendix A of this manual provides a cross-reference of test, procedures, and programs.

EIS/AS Test 1

Create and Print the Emission Factor File

In this test run, an initial EIS/AS emission factor file is created using the cataloged procedure ECEME10 which executes CSREFTR (EC0010), the emission factor file transaction sort program; and CEMEFAC (EC0020), the emission factor file edit-maintenance program. A detailed report of the emission factor file is printed by using the cataloged procedure ECRPE10 which executes CRPEFAC (EC0150), the emission factor file detailed report program.

CSREFTR (EC0010) sorts the emission factor file transactions (see Figure AST1-1 for the transaction formats) into the sequence required by CEMEFAC (EC0020). The fields of each transaction are sorted in the following order:

Columns	Description	Sort Order
1 - 2	State Code	Ascending
3 - 6	County Code	Ascending
7 - 11	Geographic Suballocation Number	Ascending
12 - 14	Category Number	Ascending
15 - 16	Category Disaggregate Number	Ascending
17	Emission Factor Origin	Ascending
18	Source Type	Ascending
19 - 23	Pollutant ID	Ascending
80	Action Code	*
79	Card Type	Ascending
24 - 28	Emission Factor Date	Ascending

A header record is generated by CSREFTR (EC0010) which appears as the first transaction but has no action code or card number. All emission factor file transactions must be sorted by CSREFTR (EC0010) before they can be used to create the emission factor file.

---

*Sort sequence is D (delete), A (add), C (change).

CEMEFAC (EC0020) edits emission factor file transactions and updates the EIS/AS emission factor file using those transactions which pass the edit criteria. The input emission factor file transactions can consist of three types: type 1, type 2, and type 3. Refer to Figure AST1-1 for the emission factor file transaction formats and to Figure AST1-2 for the emission factor file transaction load sheet.

A category record can be added to the emission factor file by processing a category-1 (type 1) add transaction or by processing both category-1 and a category-2 (type 2) add transaction for the desired category. Note that a category-2 add transaction is not valid unless it is preceded by a category-1 add transaction with the same key information. An existing category record can be changed by processing a category-1 change transaction and/or a category-2 change transaction. An existing category record can be deleted from the emission factor file by processing a category-1 delete transaction. A category-1 delete transaction also deletes all of the pollutant records associated with the category record.

A pollutant record can be added to the emission factor file by processing a pollutant (type 3) add transaction; however, the corresponding category record must exist in the emission factor file. If it does not, it must be added prior to adding the pollutant record. This may be accomplished in the same run since the emission factor file transaction sort program, CSREFTR (EC0010), sorts the transactions so that pollutant transactions follow their associated category transactions. An existing pollutant record can be changed by processing a pollutant change transaction. An existing pollutant record can be deleted from the emission factor file by processing a pollutant delete transaction. Each pollutant delete transaction deletes a single pollutant record from the emission factor file.

When the emission factor file is updated, the control date in the header record is updated using the date specified by the user on the option card. This header will also contain the date of the previous update run as well as a generation number which begins at 1 and is incremented by 1 during each update run.

There are three option fields on the option card. The first option field occurs in columns 1 through 5 and contains the control date in the Julian form YYDDD, where YY is the year and DDD is the day of the year. This date will replace the control date in the emission factor file header record, and therefore, it should be the current date of the run. If this field is either blank or not numeric, program execution will be terminated. The second option field occurs in columns 7 through 11. The option word FLAGW must be entered in this field for warning messages to be printed in the diagnostic report. If this field is blank, or if it is specified incorrectly, no warning messages will be printed. The third option field occurs in columns 13 through 16. The option word LIST must be entered in this field for the listings of the input emission factor file, the output emission factor file, and the emission factor file transactions to be produced. If this field is blank, or if it is specified incorrectly, no files will be listed.

CRPEFAC (EC0150) produces a detailed report of the EIS/AS emission factor file. This report is organized so that printed beneath each emission factor category record are the pollutant records subordinate to it. Headings are generated at the top of each page for both the emission factor category and pollutant records.

The run stream for this test run contains the JCL needed to create an EIS/AS emission factor file and produce a detailed report of this file. This run stream is shown in Figure AST1-3. It does not show all the input emission factor file transactions in the run stream, but does show the necessary JCL. The sample output produced by this procedure is shown in Figure AST1-4.

First, the run stream executes the cataloged procedure ECEME10 to create the emission factor file. Since this test run creates the initial EIS/AS emission factor file, there is obviously not an input emission factor file to be accessed. This is why the old emission factor file ECSOLEF must be a dummy file in the UPDATE step. Through the use of a substitutable parameter, the new emission factor file is named ECEMFL1. The user must supply the DD (data definition) information for the option card file in the UPDATE step and for the input emission factor file transaction file in the SORT step. The options specified in the UPDATE step of this test run are 80004, FLAGW, and LIST.

Next, the cataloged procedure ECRPE10 is executed to produce a detailed report. A substitutable parameter is used to specify ECEMFL1 as the input emission factor file.

Header Record

Record Position	Field Length	Description
1 - 23	23	All Zeros
24 - 80	57	Filler

(Page 1 of 4)

Figure AST1-1. Emission Factor File Transaction Format

Type 1 Transaction

Record Position	Field Length	Description
1 - 2	2	State
3 - 6	4	County
7 - 11	5	Suballocation
12 - 14	3	Category
15 - 16	2	Disaggregation
17 - 23	7	Filler
24 - 25	2	Year
26 - 28	3	Day
29	1	Nitrogen Flag
30	1	Sulfur Flag
31	1	Ash Flag
32 - 34	3	Nitrogen Content
35 - 37	3	Sulfur Content
38 - 40	3	Ash Content
41 - 65	25	Category Description
66 - 78	13	Filler
79	1	Card Number (1)
80	1	Action Code

(Page 2 of 4)

Figure AST1-1 - continued. Emission Factor File Transaction Format

Type 2 Transaction

Record Position	Field Length	Description
1 - 2	2	State
3 - 6	4	County
7 - 11	5	Suballocation
12 - 14	3	Category
15 - 16	2	Disaggregation
17 - 23	7	Filler
24 - 25	2	Year
26 - 28	3	Day
29 - 48	20	County Name
49 - 78	30	Filler
79	1	Card Number (2)
80	1	Action Code

(Page 3 of 4)

Figure AST1-1 - continued. Emission Factor File Transaction Format

Type 3 Transaction

Record Position	Field Length	Description
1 - 2	2	State
3 - 6	4	County
7 - 11	5	Suballocation
12 - 14	3	Category
15 - 16	2	Disaggregation
17	1	Emission Factor Origin
18	1	Emission Factor Source
19 - 23	5	Pollutant ID
24 - 25	2	Year
26 - 28	3	Day
29 - 38	10	Emission Factor
39	1	Confidence Level
40 - 54	15	Pollutant Name
55 - 64	10	Pollutant Specific Data
65 - 78	14	Filler
79	1	Card Number (3)
80	1	Action Code

(Page 4 of 4)

Figure AST1-1 - continued. Emission Factor File Transaction Format

AGENCY____________

EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
EMISSION FACTOR FILE TRANSACTIONS

BY____________
DATE____________
PAGE____ OF________

STATE 1	COUNTY 3	SUBALLOC 7	CATEG NBR 12	DISAG NBR 15

DATE YR 24	DATE DAY 26

FLAGS N 29	FLAGS S 30	FLAGS A 31	NITRO CONT 32	SULF CONT 35	ASH CONT 38	CATEGORY DESCRIPTION 41 … 65		NBR 79	ACTION 80
								1	

COUNTY NAME 39 … 48		NBR 79	ACTION 80
		2	

ORG 17	SRC 18	POLLUTANT ID 19	EMISSION FACTOR 29	CONF 39	POLLUTANT NAME 40	POLLUTANT SPECIFIC DATA 55 … 64		NBR 79	ACTION 80
								3	
								3	
								3	
								3	
								3	
								3	
								3	
								3	
								3	
								3	
								3	
								3	
								3	
								3	
								3	
								3	

Figure AST1-2. Emission Factor File Transaction Load Sheet

```
//ASTESI01 JOB    (ACCOUNTING INFO)
//*
//*   CREATE AND PRINT THE EMISSION FACTOR FILE
//*
//TESI01A EXEC ECEMEIO,
//       NEWEMFC=ECEMFL1
//*
//*   CREATE THE INITIAL EMISSION FACTOR FILE
//*
//SORT.INPUT DD *
0000000000000100        78179             RESIDENT ANTHRACITE COAL                     1A
0000000000000100F 111018005000000010000 SUSPENDED PART.                                3A
0000000000000100F 421017817900000090000 CARBON MONOXIDE                                3A
0000000000000100F 424018005000000038000 SULFER DIOXIDES                                3A
0000000000000100F 426028005000000003000    N  OXIDES                                   3A
0000000000000100F 431018005000000002500 TOTAL HY CARBON                                3A
0000000000000200        78179             RESIDENT BITUMINOUS COAL                     1A
0000000000000200F 111017817900000020000 SUSPENDED PART.                                3A
0000000000000200F 421018005000000090000 CARBON MONOXIDE                                3A
0000000000000200F 424018005000000038000 SULFER DIOXIDE                                 3A
0000000000000200F 426028005000000003000    N  OXIDES                                   3A
0000000000000200F 431017817900000020000 TOTAL HY CARBON                                3A
0000000000000300        78179             RESIDENT DISTILLATE OIL                      1A
0000000000000300F 111018005000000002500 SUSPENDED PART.                                3A
0000000000000300F 421018005000000005000 CARBON MONOXIDE                                3A
0000000000000300F 424018005000000014400 SULFUR DIOXIDE                                 3A
0000000000000300F 426028005000000001800    N  OXIDES                                   3A
0000000000000300F 431018005000000001000 TOTAL HY CARBON                                3A
0000000000000400        78179             RESIDENTIAL RESIDUAL OIL                     1A
0000000000000400F 111018005000000018900 SUSPENDED PART.                                3A
0000000000000400F 421018005000000005000 CARBON MONOXIDE                                3A
0000000000000400F 424018005000000159000 SULFUR DIOXIDE                                 3A
0000000000000400F 426028005000000018000    N  OXIDES                                   3A
0000000000000400F 431018005000000001000 TOTAL HY CARBON                                3A
0000000000000500        78179             RESIDENTIAL NATURAL GAS                      1A
0000000000000500F 111017817900000010000 SUSPENDED PART.                                3A
0000000000000500F 421018005000000020000 CARBON MONOXIDE                                3A
0000000000000500F 424018005000000000600 SULFUR DIOXIDE                                 3A
0000000000000500F 426028005000000060000    N  OXIDES                                   3A
0000000000000500F 431018005000000008000 TOTAL HY CARBON                                3A
0000000000000600        78179             RESIDENTIAL WOOD                             1A
0000000000000600F 111017817900000025000 SUSPENDED PART.                                3A
0000000000000600F 421018005000000150000 CARBON MONOXIDE                                3A
0000000000000600F 424018005000000000500 SULFUR DIOXIDE                                 3A
0000000000000600F 426028005000000001000    N  OXIDES                                   3A
```

(Remainder of transactions omitted)

```
//UPDATE.ECSDLEF DD DUMMY
//UPDATE.OPTIONS DD *
R0004 FLAGW LIST
// EXEC ECPPEIO,
//       EMFLFIL=ECEMFL1
//*
//*   PRINT THE EMISSION FACTOR FILE CREATED IN STEP A
//*
```

Figure AST1-3. Run Stream

```
               EIS/AS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE     1

PROGRAM NAME: CSREFTR (EC0010)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

                                                         919
NUMBER OF INPUT TRANSACTIONS:                            920
NUMBER OF OUTPUT TRANSACTIONS:
```

Figure AST1-4. Sample Output

(Page 1 of 7)

```
                    EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                    PAGE     1
PROGRAM NAME: CEMEFAC (EC0020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD   /

   CONTROL DATE IS 80004,  ERROR OPTION IS FLAG   ,  LIST OPTION IS LIST


0000000000000000        79295                                                    1D
                  *** CEMEFAC 022 ERROR - DELETE SPECIFIED FOR NONEXISTENT EIS/AS EMF RECORD - CARD REJECTED

0000000000000000        79299                                                    1D
                  *** CEMEFAC 022 ERROR - DELETE SPECIFIED FOR NONEXISTENT EIS/AS EMF RECORD - CARD REJECTED

0000000000000300        79295                                                    1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

0000000000000300S111101792950000000111 TSP.          TONS/SQ. MI                 3A
                  *** CEMEFAC 037 ERROR - COLUMN 17, EF ORIGIN MUST BE F FOR NEDS CATEGORY - CARD REJECTED

0000000000003600        78179            HVY DUTY GAS VEH RURAL RD               1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

0000000000003700        78179            HVY DUTY GAS VEH SUB' RD                1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

0000000000003800        78179            HVY DUTY GAS VEH URBAN RD               1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

0000000000004000        78179            HVY DUTY DIESEL VEH LACRD               1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

0000000000004400        78179            OFF HIGHWAY DIESEL VEH                  1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

0000000000004500        78179            RAILROAD LOCOMOTIVES                    1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

0000000000004600        78179            MILITARY AIRCRAFT LTO'S                 1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

0000000000004700        78179            CIVIL AIRCRAFT LTO'S                    1A
```

Figure AST1-4 - continued. Sample Output (Page 2 of 7)

```
                         EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                          PAGE     8
2201220003527            792956SA0000000000CAT. DESCRIPTION                        4A
                              *** CEMEFAC 017 ERROR - COLUMN 79, CARD TYPE INVALID - CARD REJECTED
                              *** CEMEFAC 011 ERROR - COLUMN 12, CATEGORY NOT NUMERIC - CARD REJECTED
                              *** CEMEFAC 023 ERROR - COLUMN 15, DISAGGREGATION NOT NUMERIC - CARD REJECTED

9999999999999999         79295                                                     1C
                              *** CEMEFAC 005 ERROR - COLUMN 1, STATE INVALID - CARD REJECTED


NUMBER OF TRANSACTIONS READ:                                        920
NUMBER OF ERRORS DETECTED:                                          118
NUMBER OF WARNINGS DETECTED:                                          0
NUMBER OF TRANSACTIONS REJECTED:                                    102
NUMBER OF EMISSION FACTOR FILE RECORDS READ:                          0
NUMBER OF EMISSION FACTOR FILE RECORDS WRITTEN:                     682


PROGRAM NAME: CEMEFAC (EC0020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

Figure AST1-4 - continued. Sample Output (Page 3 of 7)

BLANK

PAGE

```
                                          EIS/AS TRANSACTION FILE LISTING                                                    PAGE     1

00000000000000000000000000000000000000000000000000000000000000000000000000000000000
000000000000000000      79295                                                    1D
000000000000000000      79299                                                    1D
000000000000000000      79295                                                    1A
000000000000000000      79295                                                    1C
000000000000000100      78179             RESIDENT ANTHRACITE COAL               1A
000000000000000100F 11101800500000010000 SUSPENDED PART.                         3A
000000000000000100F 42101781790000090000 CARBON MONOXIDE                         3A
000000000000000100F 42401800500000038000 SULFER DIOXIDES                         3A
000000000000000100F 42602800500000003000    N  OXIDES                            3A
000000000000000100F 43101800500000062500 TOTAL HY CARBON                         3A
000000000000000200      78179             RESIDENT BITUMINOUS COAL               1A
000000000000000200F 11101781790000020000 SUSPENDED PART.                         3A
000000000000000200F 42101800500000090000 CARBON MONOXIDE                         3A
000000000000000200F 42401800500000038000 SULFER DIOXIDE                          3A
000000000000000200F 42602800500000003000    N  OXIDES                            3A
000000000000000200F 43101781790000020000 TOTAL HY CARBON                         3A
000000000000000300      78179             RESIDENT DISTILLATE OIL                1A
000000000000000300      79295                                                    1A
000000000000000300      79295BAD COUNTY                                          2A
000000000000000300F 11101800500000002500 SUSPENDED PART.                         3A
000000000000000300F 42101800500000005000 CARBON MONOXIDE                         3A
000000000000000300F 42401800500000144000 SULFUR DIOXIDE                          3A
000000000000000300F 42602800500000018000    N  OXIDES                            3A
000000000000000300F 43101800500000001000 TOTAL HY CARBON                         3A
000000000000000300S111101792950000000111 TSP.            TONS/SQ. MI             3A
000000000000000400      78179             RESIDENTIAL RESIDUAL OIL               1A
000000000000000400F 11101800500000016900 SUSPENDED PART.                         3A
000000000000000400F 42101800500000005000 CARBON MONOXIDE                         3A
000000000000000400F 42401800500000159000 SULFUR DIOXIDE                          3A
000000000000000400F 42602800500000018000    N  OXIDES                            3A
000000000000000400F 43101800500000001000 TOTAL HY CARBON                         3A
000000000000000500      78179             RESIDENTIAL NATURAL GAS                1A
000000000000000500F 11101781790000010000 SUSPENDED PART.                         3A
000000000000000500F 42101800500000020000 CARBON MONOXIDE                         3A
000000000000000500F 42401800500000000600 SULFUR DIOXIDE                          3A
000000000000000500F 42602800500000080000    N  OXIDES                            3A
000000000000000500F 43101800500000008000 TOTAL HY CARBON                         3A
000000000000000600      78179             RESIDENTIAL WOOD                       1A
000000000000000600F 11101781790000025000 SUSPENDED PART.                         3A
000000000000000600F 42101800500000150000 CARBON MONOXIDE                         3A
000000000000000600F 42401800500000000500 SULFUR DIOXIDE                          3A
000000000000000600F 42602800500000001000    N  OXIDES                            3A
000000000000000600F 43101800500000006000 TOTAL HY CARBON                         3A
000000000000000700      78179             COMM-INST ANTHRACITE COAL              1A
000000000000000700F 11101800500000001000 SUSPENDED PART.                         3A
```

Figure AST1-4 - continued. Sample Output

(Page 4 of 7)

```
                                   EIS/AS EMISSION FACTOR FILE OUTPUT LISTING                                          PAGE      1
000000     00000000000000000000B000     00001
000000     000000000001        79295
000000     000000001001        78179                                      RESIDENT ANTHRACITE COAL
000000     0000000010021 11101B0050000000100000SUSPENDED PART.
000000     0000000010021 4210178179000000900000CARBON MONOXIDE
000000     0000000010021 42401B0050000003800000SULFUR DIOXIDES
000000     0000000010021 42602B0050000000030000   N  OXIDES
000000     0000000010021 43101B0050000000250000TOTAL HY CARBON
000000     000000002001        78179                                      RESIDENT BITUMINOUS COAL
000000     0000000020021 1110178179000000200000SUSPENDED PART.
000000     0000000020021 42101B0050000000900000CARBON MONOXIDE
000000     0000000020021 42401B0050000003800000SULFUR DIOXIDE
000000     0000000020021 42602B0050000000030000   N  OXIDES
000000     0000000020021 4310178179000000200000TOTAL HY CARBON
000000     000000003001        79295               BAD COUNTY             RESIDENT DISTILLATE OIL
000000     0000000030021 11101B0050000000250000SUSPENDED PART.
000000     0000000030021 42101B0050000000050000CARBON MONOXIDE
000000     0000000030021 42401B0050000001440000SULFUR DIOXIDE
000000     0000000030021 42602B0050000000180000   N  OXIDES
000000     0000000030021 43101B0050000000010000TOTAL HY CARBON
000000     000000004001        78179                                      RESIDENTIAL RESIDUAL OIL
000000     0000000040021 11101B0050000000169000SUSPENDED PART.
000000     0000000040021 42101B0050000000050000CARBON MONOXIDE
000000     0000000040021 42401B0050000001590000SULFUR DIOXIDE
000000     0000000040021 42602B0050000000180000   N  OXIDES
000000     0000000040021 43101B0050000000010000TOTAL HY CARBON
000000     000000005001        78179                                      RESIDENTIAL NATURAL GAS
000000     0000000050021 1110178179000000100000SUSPENDED PART.
000000     0000000050021 42101B0050000000200000CARBON MONOXIDE
000000     0000000050021 42401B0050000000006000SULFUR DIOXIDE
000000     0000000050021 42602B0050000000800000   N  OXIDES
000000     0000000050021 43101B0050000000080000TOTAL HY CARBON
000000     000000006001        78179                                      RESIDENTIAL WOOD
000000     0000000060021 1110178179000000250000SUSPENDED PART.
000000     0000000060021 42101B0050000001500000CARBON MONOXIDE
000000     0000000060021 42401B0050000000005000SULFUR DIOXIDE
000000     0000000060021 42602B0050000000010000   N  OXIDES
000000     0000000060021 43101B0050000000060000TOTAL HY CARBON
000000     000000007001        78179                                      COMM-INST ANTHRACITE COAL
000000     0000000070021 11101B0050000000010000SUSPENDED PART.
000000     0000000070021 42101B0050000000010000CARBON MONOXIDE
000000     0000000070021 42401B005000000038000C SULFUR DIOXIDE
000000     0000000070021 42602B0050000000100000   N  OXIDES
000000     0000000070021 43101B0050000000000000TOTAL HY CARBON
000000     000000008001        78179                                      COMM-INST BITUMINOUS COAL
000000     0000000080021 1110178179000000580000SUSPENDED PART.
```

Figure AST1-4 - continued. Sample Output

(Page 5 of 7)

```
                        EIS/AS EMISSION FACTOR FILE DETAILED REPORT PROGRAM  -  DIAGNOSTIC REPORT                  PAGE      1

PROGRAM NAME: CRPEFAC (EC0150)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

EMISSION FACTOR FILE RECORD COUNT:        682
NUMBER OF CATEGORIES IN LIST:              94
NUMBER OF POLLUTANT ENTRIES IN LIST:      587
   FEDERAL POLLUTANT ENTRIES:             320
   STATE POLLUTANT ENTRIES:               133
   LOCAL POLLUTANT ENTRIES:               134
NUMBER OF ERRORS:                           0
NUMBER OF PAGES IN REPORT:                 19
```

Figure AST1-4 - continued. Sample Output

(Page 6 of 7)

```
                                  EIS/AS EMISSION FACTOR FILE DETAILED REPORT                               PAGE     11

STATE     COUNTY                                SUBALLOC    DISAG       CATEGORY                            CAT  DATE     FLAGS/CONTENTS %'S
          CODE  NAME                            NUMBER        #       NUMBER       DESCRIPTION               YY   DDD     NIT       SUL       ASH
--------------------------------------------------------------------------------------------------------------------------------------------------
                                                  EMF  DATE        POLLUTANT                                          EMISSION      CONF        POLLUTANT
                                                  YY   DDD       ID         NAME                 ORIG    SOURCE        FACTOR       LEVEL       SPEC DATA
                                                  ------------------------------------------------------------------------------------------------

 00       0000                                  00000        00       061      MANAGED BURNING-PRESCRIBE   78   179
                                                   78   179     11101      SUSPENDED PART.      FEDERAL                17.000        0
                                                   80   050     42101      CARBON MONOXIDE      FEDERAL               140.000        0
                                                   80   050     42401      SULFUR DIOXIDE       FEDERAL                 0.150        0
                                                   80   050     42602        N  OXIDES          FEDERAL                 4.000        0
                                                   80   050     43101      TOTAL HY CARBON      FEDERAL                24.000        0

 00       0000                                  00000        00       062      AGRICULTURE FIELD BURNING   78   179
                                                   78   179     11101      SUSPENDED PART.      FEDERAL                17.000        0
                                                   80   050     42101      CARBON MONOXIDE      FEDERAL               100.000        0
                                                   80   050     42401      SULFUR DIOXIDE       FEDERAL                 0.000        0
                                                   80   050     42602        N  OXIDES          FEDERAL                 2.000        0
                                                   80   050     43101      TOTAL HY CARBON      FEDERAL                20.000        0

 00       0000                                  00000        00       063      FROST CNTRL-ORCHARD HEATR   78   179
                                                   78   179     11101      SUSPENDED PART.      FEDERAL                 0.200        0
                                                   78   179     42101      CARBON MONOXIDE      FEDERAL                22.000        0
                                                   80   050     42401      SULFUR DIOXIDE       FEDERAL                 0.100        0
                                                   80   050     42602        N  OXIDES          FEDERAL                 0.000        0
                                                   80   050     43101      TOTAL HY CARBON      FEDERAL                43.000        0

 00       0000                                  00000        00       064      STRUCTURAL FIRES            78   179
                                                   80   050     11101      SUSPENDED PART.      FEDERAL               143.000        0
                                                   80   050     42101      CARBON MONOXIDE      FEDERAL               582.000        0
                                                   80   050     42401      SULFUR DIOXIDE       FEDERAL                 0.400        0
                                                   80   050     42602        N  OXIDES          FEDERAL                17.000        0
                                                   80   050     43101      TOTAL HY CARBON      FEDERAL               107.000        0

 06       1280  ANY-NAME                        00000        00       000      RESIDENT ANTHRACITE COAL    79   297   N/.010    S/20.0    A/ 3.0
                                                   79   299     11101      PARTICULATES          STATE                  1.000        0
                                                   79   310     42101      CARBON MONOXIDE       STATE                  0.100        0
                                                   79   310     42401      SULFUR DIOXIDE        STATE                  0.100        0
                                                   79   310     42602      NITROGEN OXIDES       STATE                  0.200        0
                                                   79   310     43101      HYDROCARBONS          STATE                  0.020        0
                                                   79   299     11101      PARTICULATES          LOCAL                 12.000        0
                                                   79   296     42101      CARBON MONOXIDE       LOCAL                  0.000        0
                                                   79   296     42401      SULFUR DIOXIDE        LOCAL                  0.000        0
                                                   79   296     42602      NITROGEN OXIDES       LOCAL                  0.000        0
                                                   79   296     43101      HYDROCARBONS          LOCAL                  0.000        0

 06       1280  ANY-NAME                        00000        00       002      RESIDENT BITUMINOUS COAL    79   297   N/.100              A/ 4.0
                                                   79   299     11101      PARTICULATES          STATE                  2.000        0
                                                   79   310     42101      CARBON MONOXIDE       STATE                  0.575        0
```

Figure AST1-4 - continued. Sample Output

(Page 7 of 7)

BEST DOCUMENT AVAILABLE

EIS/AS Test 2

Create the Initial Master File Using NEDS Transactions

In this test run, the initial EIS/AS master file is created from NEDS transactions using the cataloged procedure ECFMM20 which executes CCENETR (EC0030), the NEDS to EIS/AS master file transaction conversion-edit program; CSRINTR (EC0050), the master file internal transaction sort program; CMSEFIN (EC0060), the master file internal transaction emission factor insertion program; and CFMMSTR (EC0070), the master file maintenance program.

CCENETR (EC0030) edits the input NEDS area source transactions and converts those that pass the edit criteria into EIS/AS internal transactions. The input NEDS area source transactions include the A1 thru A7 cards. Refer to Figure AST2-1 for the transaction formats.

Description, category, and NEDS comment internal transactions are generated from the NEDS transactions. A NEDS A1 add transaction will generate the description transactions used to build a county description record in the master file. A NEDS A6 add transaction will add a NEDS A6 comment record to the master file. A NEDS A7 or any category field on the NEDS A1 thru A5 cards will generate the category transactions necessary to add the category to the master file. Note that the county description record must exist before category or comment records are added for the county. Internal transactions produced in CCENETR (EC0030) will have a geographic suballocation number of zero (that is, only county records). Category transactions for categories 001-064 will be generated for those categories passing edit criteria; the category disaggregation number will be zero.

All NEDS transactions are edited for valid state, county, AQCR, action code, A-type card, and card number. If any of these fields are in error, the transaction will be rejected, and no EIS/AS internal transactions will be created from that NEDS transaction. An invalid value in any other NEDS field will result in that field being rejected, but other fields on that transaction will be accepted if valid.

The options in this program are used to determine if the year field in the NEDS A1 transaction is valid, if the warning messages are to appear in the diagnostic report, and if the input NEDS transactions and output internal transactions should be printed. A two-digit year must be specified in card columns 1 and 2 of the option card in order to edit the year field in the NEDS A1 transaction (the NEDS A1 year must not be greater than the option card year). If the warning messages are to be printed in the diagnostic report, the word FLAGW must appear in card columns 4 through 8; or, the warning-level messages will be suppressed. In order for the input NEDS transactions and output internal transactions to be printed, the word LIST must appear in card columns 10 through 13 of the option card; otherwise, the listings will not be printed. A valid option card must be present in the run stream; failure to enter the option card will cause program execution to be terminated prematurely.

CSRINTR (EC0050) sorts the master file internal transactions into the sequence required by CMSEFIN (EC0060) and CFMMSTR (EC0070). All master file internal transactions must be sorted by CSRINTR (EC0050) before they can be used to create (or update) the EIS/AS master file. A header record is generated by CSRINTR (EC0050) which appears as the first transaction but has no action code or card number.

CMSEFIN (EC0060) inserts emission factor information from the EIS/AS emission factor file into the category-2 and category-5 internal transactions. The information to be inserted, as well as the conditions for insertion, are specified on the option card.

In order to insert the information, CMSEFIN (EC0060) matches category-2 transactions to category records in the emission factor file and category-5 transactions to pollutant records. For category-2 transactions, a matching state- or local-origin record is sought; if one is not found, a matching federal-origin record is sought. Since category-5 records contain a character to indicate federal, state, or local origin, a matching record of that specified origin is sought.

If a matching emission factor file record is found for an internal transaction, the information in that record is inserted into the appropriate fields of the transaction. No changes are made to any of the other input internal transactions.

The user can specify by means of an option card the transaction fields for insertion and can specify whether or not data from the emission factor file should override (i.e., replace) existing data in any of those fields. The user can also specify whether or not emission factor file data must satisfy date criteria and whether or not warning messages should be printed. All options are specified in fixed fields on the option card. See Figure AST2-2 for the format of the option card.

A transaction field is specified for insertion by coding its identifier and an 'I' in the appropriate option card field. The valid fields for insertion and their identifiers are as follows:

Field	Identifier
Nitrogen Content	NIT
Sulfur Content	SUL
Ash Content	ASH
Emission Factor	EMISSION
Confidence Level	CONF
Pollutant-Specific Data	SPEC

If no valid fields are specified for insertion, the emission factor and confidence level fields are assumed as defaults.

If a valid transaction field has been specified for insertion, that field must be blank for any data to be inserted. If the user desires to insert data into a field regardless of its content, he can specify an override for that field by coding an 'O' in the appropriate option card field. If an override is specified for a particular field, any data in that field will be replaced with data from the matching emission factor file record.

Date criteria can be established for insertions by coding a date identifier and a date value. For nitrogen, sulfur, and ash content, the date identifier is 'CDAT' (category record date); for emission factor, confidence level, and pollutant-specific data, the date identifier is 'PDAT' (pollutant record date). The date value is expressed as a Julian date; that is, as a 5-character number, the first two digits of which represent the year and the last three, the day within the year. No insertion will be made into a field if the date of the matching emission factor file record is prior to the date specified for that field. If no date criteria are specified, insertions into the specified fields will be made regardless of the dates of the emission factor file records.

If 'FLAGW' is coded in the warning message suppression field of the option card, all warning messages will be printed in the diagnostic report; if 'NOFLAGW' is coded, no warning messages will be printed. If this field is left blank or improperly coded, NOFLAGW is assumed.

CFMMSTR (EC0070) creates and maintains the EIS/AS master file which is a variable-length, sequential file. This file contains three types of records: description, category, and comment.

The description record contains general descriptive information pertaining to a geographic area. This geographic area may be either a county or a smaller area denoted by a nonzero geographic suballocation number. A county description record must be present before any other records can be accepted for that county; i.e., suballocation description, category, and comment records. Also a description record (county or suballocation) must be present before any category records (including category disaggregation records) or comment records can be accepted for that geographic area.

Category records contain emission information for a geographic area and are subordinate to the description record for that area. There can be up to 999 category records for each geographic area: category records 001-064 are used for the NEDS categories; 065-998 are used for user-defined categories, and category 999 is generated by CFMMSTR (EC0070). In addition, each category can be disaggregated with a separate record describing each disaggregation. The category 999 record contains a summary of emissions for all the category records with a disaggregation number of zero.

The comment records are used to include additional information for both geographic areas (county and/or suballocation description records) and categories (both category and disaggregation). There can only be one NEDS comment record for a county description record; all other EIS/AS records can have up to 999 comment records. Comment records will only be added if there is a record in the master file (description or category) with matching key information, including state, county, geographic suballocation number, category number, and category disaggregation number.

The options in CFMMSTR (EC0070) are used to determine if the warning messages are to be printed in the diagnostic report and if the listings of the input and output master file and of the internal transactions should be produced. A two-digit year may be specified in card columns 1 and 2. A value of FLAGW in card columns 4 through 8 will allow the warning messages to be printed. Otherwise, no warning messages will be printed. Similarly, a value of LIST in card columns 10 through 13 will produce all the listings. Otherwise, the listings will not be produced.

The run stream for this test run contains the JCL necessary for creating an EIS/AS master file from NEDS area source transactions. This run stream is shown in Figure AST2-3. It does not show all the input NEDS transactions in the run stream, but does show the necessary JCL.

The cataloged procedure executed by this run stream is ECFMM20. For the CONVERT step, the user must supply the DD (data definition) information for the option card file and the input NEDS transaction file. The options specified in the CONVERT step are 80, FLAGW and LIST. The user must also supply the DD information for the option card file in the INSERT step. In this step of the test run the options specified are: NOFLAGW, NIT IO, SUL IO, ASH IO, EMISSION IO, CONF IO, and SPEC IO. Since this test run creates the initial EIS/AS master file , there is obviously not an input master file to be accessed. This is why the old master file ECSOLMF must be a dummy file in the UPDATE step. Also, the options specified in the UPDATE step are 80, FLAGW and LIST. Through the use of substitutable parameters, the emission factor file is specified as ECEMFL1 (created in Test 1) and the new master file is named ECMSTR1. Refer to Figure AST2-4 for the sample output produced by this run stream.

NEDS A1 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 11	2	Numeric	Year of Record
12 - 16	5	Numeric	SIP Estimate - TSP
17 - 20	4	Numeric	SIP Estimate - SO_2
21 - 24	4	Numeric	SIP Estimate - NO_x
25 - 29	5	Numeric	SIP Estimate - HC
30 - 34	5	Numeric	SIP Estimate - CO
35 - 36	2	Numeric	Sulfur Content - Anthracite Coal
37 - 38	2	Numeric	Sulfur Content - Bituminous Coal
39 - 40	2	Numeric	Sulfur Content - Distillate Oil
41 - 42	2	Numeric	Sulfur Content - Residual Oil
43 - 45	3	Numeric	Ash Content - Anthracite Coal
46 - 48	3	Numeric	Ash Content - Bituminous Coal
49 - 53	5	Numeric	Residential Fuel - Anthracite Coal

(Page 1 of 10)

Figure AST2-1. NEDS Area Source Transaction Formats

NEDS A1 Transaction (continued)

Column #	Field Length	Data Type	Description
54 - 59	6	Numeric	Residential Fuel - Bituminous Coal
60 - 64	5	Numeric	Residential Fuel - Distillate Oil
65 - 68	4	Numeric	Residential Fuel - Residual Oil
69 - 73	5	Numeric	Residential Fuel - Natural Gas
74 - 77	4	Numeric	Residential Fuel - Wood
78	1	Alphabetic	Action Code
79	1	Alphabetic	'A' (Area Source)
80	1	Numeric	'1' (Card Number)

(Page 2 of 10)

Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A2 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Commercial Fuel - Anthracite Coal
15 - 19	5	Numeric	Commercial Fuel - Bituminous Coal
20 - 24	5	Numeric	Commercial Fuel - Distillate Oil
25 - 29	5	Numeric	Commercial Fuel - Residual Oil
30 - 33	4	Numeric	Commercial Fuel - Natural Gas
34 - 35	2	Numeric	Commercial Fuel - Wood
36 - 41	6	Numeric	Industrial Fuel - Anthracite Coal
42 - 47	6	Numeric	Industrial Fuel - Bituminous Coal
48 - 51	4	Numeric	Industrial Fuel - Coke
52 - 56	5	Numeric	Industrial Fuel - Distillate Oil

(Page 3 of 10)

Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A2 Transaction (continued)

Column #	Field Length	Data Type	Description
57 - 61	5	Numeric	Industrial Fuel - Residual Oil
62 - 66	5	Numeric	Industrial Fuel - Natural Gas
67 - 69	3	Numeric	Industrial Fuel - Wood
70 - 73	4	Numeric	Industrial Fuel - Process Gas
74 - 77	4	Blank	Unused
78	1	Alphabetic	Action Code
79	1	Alphabetic	'A' (Area Source)
80	1	Numeric	'2' (Card Number)

(Page 4 of 10)

Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A3 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 15	6	Numeric	On Site Incineration - Residential
16 - 20	5	Numeric	On Site Incineration - Industrial
21 - 24	4	Numeric	On Site Incineration - Commercial
25 - 30	6	Numeric	Open Burning - Residential
31 - 36	6	Numeric	Open Burning - Industrial
37 - 41	5	Numeric	Open Burning - Commercial
42 - 48	7	Numeric	Gasoline Fuel - Light Vehicle
49 - 54	6	Numeric	Gasoline Fuel - Heavy Vehicle
55 - 60	6	Numeric	Gasoline Fuel - Off Highway
61 - 66	6	Numeric	Diesel Fuel - Heavy Vehicle
67 - 71	5	Numeric	Diesel Fuel - Off Highway
72 - 76	5	Numeric	Diesel Fuel - Rail Locomotive
77	1	Numeric	Population Code
78	1	Alphabetic	Action Code
79	1	Alphabetic	'A' (Area Source)
80	1	Numeric	'3' (Card Number)

(Page 5 of 10)

Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A4 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 13	4	Numeric	Aircraft - Military
14 - 19	6	Numeric	Aircraft - Civil
20 - 24	5	Numeric	Aircraft - Commercial
25 - 28	4	Numeric	Vessels - Coal
29 - 32	4	Numeric	Vessels - Diesel Oil
33 - 37	5	Numeric	Vessels - Residual Oil
38 - 41	4	Numeric	Vessels - Gasoline
42 - 47	6	Numeric	Evaporation - Solvent Purchased
48 - 52	5	Numeric	Evaporation - Gasoline Marketed
53 - 58	6	Numeric	Measured Vehicle Miles - Limited Access Road
59 - 64	6	Numeric	Measured Vehicle Miles - Rural Road
65 - 70	6	Numeric	Measured Vehicle Miles - Suburban Road
71 - 77	7	Numeric	Measured Vehicle Miles - Urban Road
78	1	Alphabetic	Action Code
79	1	Alphabetic	'A' (Area Source)
80	1	Numeric	'4' (Card Number)

(Page 6 of 10)

Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A5 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 16	7	Numeric	Dirt Roads Traveled
17 - 21	5	Numeric	Dirt Air Strips
22 - 27	6	Numeric	Construction Acres
28 - 32	5	Numeric	Miscellaneous Wind Erosion
33 - 37	5	Numeric	Land Tilling
38 - 44	7	Numeric	Forest Wildfires - Acres Burned
45 - 47	3	Numeric	Forest Wildfires - Tons per Acre Burned
48 - 53	6	Numeric	Managed Burning - Acres Burned
54 - 56	3	Numeric	Managed Burning - Tons per Acre Burned
57 - 62	6	Numeric	Agricultural Field Burning - Acres Burned
63 - 65	3	Numeric	Agricultural Field Burning - Tons per Acre Burned
66 - 69	4	Numeric	Frost Control - Orchard Heaters Operating
70 - 72	3	Numeric	Frost Control - Days Fired

(Page 7 of 10)

Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A5 Transaction (continued)

Column #	Field Length	Data Type	Description
73 - 77	5	Numeric	Structure Fires
78	1	Alphabetic	Action Code
79	1	Alphabetic	'A' (Area Source)
80	1	Numeric	'5' (Card Number)

(Page 8 of 10)

Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A6 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 77	68	Alphanumeric	Comments
78	1	Alphabetic	Action Code
79	1	Alphabetic	'A' (Area Source)
80	1	Numeric	'6' (Card Number)

(Page 9 of 10)

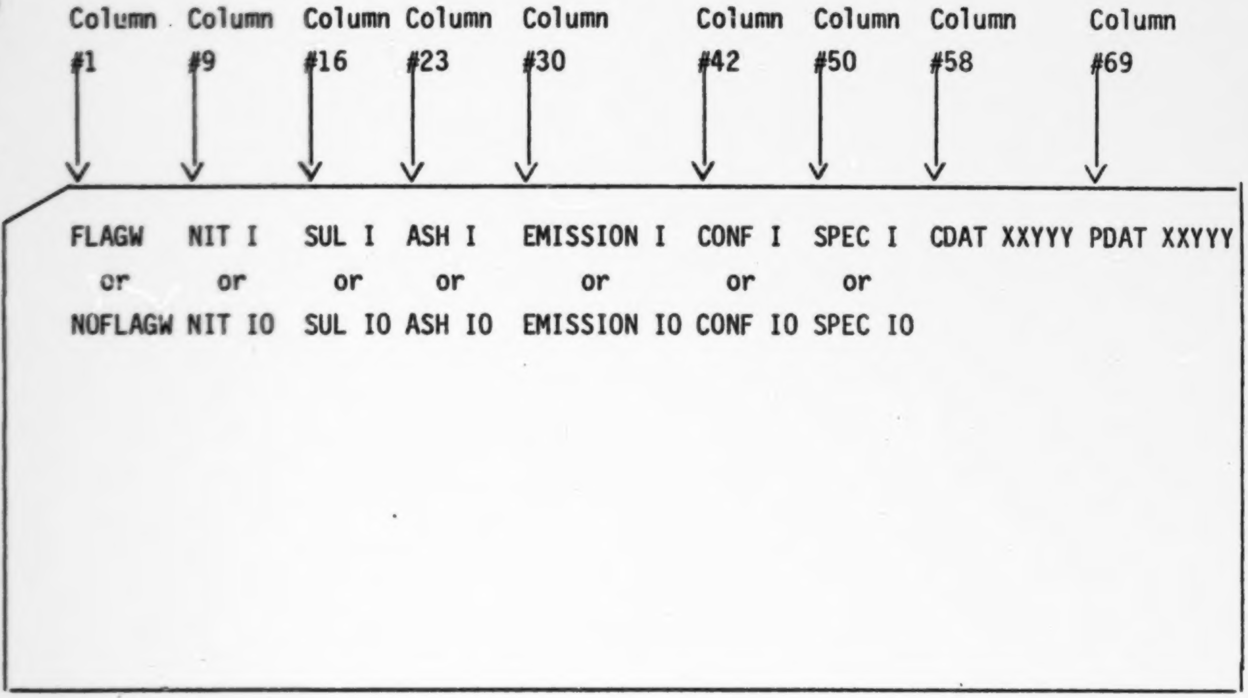
Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A7 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 11	2	Numeric	Year of Record
12 - 13	2	Numeric	Source Code
14 - 19	6	Numeric	Emission Estimate - TSP
20 - 24	5	Numeric	Emission Estimate - SO_2
25 - 30	6	Numeric	Emission Estimate - NO_x
31 - 36	6	Numeric	Emission Estimate - HC
37 - 43	7	Numeric	Emission Estimate - CO
44 - 77	34	Alphanumeric	Comment
78	1	Alphabetic	Action Code
79	1	Alphabetic	'A' (Area Source)
80	1	Numeric	'7' (Card Number)

(Page 10 of 10)

Figure AST2-1 - continued. NEDS Area Source Transaction Formats



Column #1	Column #9	Column #16	Column #23	Column #30	Column #42	Column #50	Column #58	Column #69
FLAGW	NIT I	SUL I	ASH I	EMISSION I	CONF I	SPEC I	CDAT XXYYY	PDAT XXYYY
or	or	or	or	or	or	or		
NOFLAGW	NIT IO	SUL IO	ASH IO	EMISSION IO	CONF IO	SPEC IO		

Note:
1. XX denotes the year; YYY the Julian date
2. Each field must contain one of the possible values indicated for it or be blank.

Figure AST2-2. Option Card Format

```
//ASTEST02 JOB    (ACCOUNTING INFO)
//*
//*   CREATE THE INITIAL MASTER FILE USING NEDS TRANSACTIONS
//*
//TEST02A EXEC ECFMM20,
//        FMFCFIL=ECFMFL1,
//        NEWMSTR=ECMSTR1
//*
//*   USE NEDS TRANSACTIONS TO CREATE THE ORIGINAL MASTER FILE
//*
//CONVERT.INPUT DD *
1478400747500197000300100001500055063803110930930000100010100137     00042     AA1
147840074      0000300023000310012            000037     000110003000007             AA2
147840074000947                               000567100081000652000826000001001216AA3
147840074     000365                    026700052500089       003098          0005303AA4
1478400740000005     0000870009900224          012                            00052AA5
147840074WABASH                                                                   AA6
14784007480050003000002000015000025000040000A7 EMISSION RECORDED                  AA7
14784007480340003000002000015000025000040000A7 EMISSION RECORDED                  AA7
14784007480010003000002000015000025000040000A7 EMISSION RECORDED                  AA7
14780007480490003000002000015000025000040000A7 EMISSION RECORDED                  AA7
\4840007480050003000002000015000025000040000A7 EMISSION RECORDED                  AA7
1478600657501138000700220002300098063803110930930000100008100183     00096     AA1
147860065      0000400034000450025            000281     000620017000023             AA2
147860065001467                               001204800172100118400158600003003145AA3
147860065     000767                  006600056700207       009113            0006651AA4
1478600650000030     0001670028500649          012                            00060AA5
147860065WARREN                                                                   AA6
14786006560270003000002100015102025000120000A7 EMISSION RECORDED                  AA7
14786006580140003000002100015102025000120000A7 EMISSION RECORDED                  AA7
14786006560640003000002100015102025000120000A7 EMISSION RECORDED                  AA7
1480800747500540000300140001800067063803110930930000100010300044     00089     AA1
148040074      0000300026000340031            000059     000140005000004             AA2
148040074001228                               000833100119000103000110700003001094AA3
148040074     000475                          000627001 64       007986       0004302AA4
1480400740000014     0000130031200605          012                            00067AA5
148040074WAYNE                                                                    AA6
14804007480190003000002200015172525900160000A7 EMISSION RECORDED                  AA7
14804007480280003000002000015170525000100000A7 EMISSION RECORDED                  AA7
14804007480440003000001200011170522000102000A7 EMISSION RECORDED                  AA7
14804007480510003000001200011170522000102000A7 EMISSION RECORDED                  AA7
```

(Remainder of transactions omitted)

```
//CONVERT.OPTIONS DD *
RU FLAGW LIST
//INSERT.OPTIONS DD *
NOFLAGW NIT TO SUL TO ASH TO EMISSION TO CONF TO SPEC TO
//UPDATE.ECSDLMF DD DUMMY,DCB=BLKSIZE=1327
//UPDATE.OPTIONS DD *
RU FLAGW LIST
```

Figure AST2-3. Run Stream

```
                         NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                              PAGE     1

PROGRAM NAME: CCENETR (EC0030)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

    CONTROL DATE IS 80  ,  ERROR OPTION IS FLAGW  ,  LIST OPTION IS LIST


\4840007486050003000002000015000025000040000A7 EMISSION RECORDED            AA7
BE
          *** CCENETR 085 ERROR - COLUMN 01 - INVALID STATE-TRANSACTION REJECTED
```

```
---------------------------------------------------------------------------------------------------------
```

```
                      NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                              PAGE     2

NUMBER OF NEDS TRANSCTIONS READ:                             69
NUMBER OF ERRORS DETECTED:                                    1
NUMBER OF ABORTS DETECTED:                                    0
NUMBER OF CONDITIONALS DETECTED:                              0
NUMBER OF INTERNAL TRANSACTIONS WRITTEN:                  2,089
```

Figure AST2-4. Sample Output (Page 1 of 8)

```
                                     NEDS AREA SOURCE TRANSACTION LISTING                                          PAGE       1
1478400747500197000300100001500055063803110930930000100010100137    00042    AA1
147840074     0000300023000310012        000037    000110003000007           AA2
147840074000947                          000567100081000065200082600001001216AA3
147840074    000365                  026700052500089      003098      0005303AA4
1478400740000005     0000670009900224       012                         00052AA5
147840074WABASH                                                              AA6
14784007480050003000002000015000025000040000A7 EMISSION RECORDED             AA7
14784007480340003000002000015000025000040000A7 EMISSION RECORDED             AA7
14784007480010003000002000015000025000040000A7 EMISSION RECORDED             AA7
14784007480490003000002000015000025000040000A7 EMISSION RECORDED             AA7
\4840007480050003000002000015000025000040000A7 EMISSION RECORDED             AA7
147860065750113600700220002300098063803110930930000100008100183     00096    AA1
147860065     0000400034000450025        000281    000620017000023           AA2
147860065001467                          001204800172100118400156600003003145AA3
147860065    000767                  006600056700207      009113      0008651AA4
1478600650000030     0001670028500649       012                         00080AA5
147860065WARREN                                                              AA6
14786006580220003000002100015102025000120000A7 EMISSION RECORDED             AA7
14786006580140003000002100015102025000120000A7 EMISSION RECORDED             AA7
14786006580640003000002100015102025000120000A7 EMISSION RECORDED             AA7
1480400747500540000300140001800067063803110930930000100010300044    00069    AA1
148040074     0000300026000340031        000059    000190005000004           AA2
148040074001228                          000633100119000103000110700003001094AA3
148040074    000475                  000627001 64         007986      0004302AA4
1480400740000014     0000130031200605       012                         00067AA5
148040074WAYNE                                                               AA6
14804007480190003000002200015172525900160000A7 EMISSION RECORDED             AA7
14804007480280003000000200015170525000100000A7 EMISSION RECORDED             AA7
14804007480440003000001200011170522000102000A7 EMISSION RECORDED             AA7
14804007480510003000001200011170522000102000A7 EMISSION RECORDED             AA7
4206801987501300060009002400022900  100218   091     00000500099    000130089AA1
420680198     00011          0001                  00008     00001           AA2
420680198               00027000000100025001172200034100116600148000011000131AA3
420680198    000584                  057500078900273                         AA4
4206801980015840     114000          0000457009002870003                     AA5
420680198                                                                    AA6
42068019880040003000041200015170527000102400A7 EMISSION RECORDED             AA7
42068019880130003000041200015170507000102000A7 EMISSION RECORDED             AA7
42068019880370003000041200015170507000102000A7 EMISSION RECORDED             AA7
4213801987501600070073002000003500  100218   091     00001300273    000280052AA1
421380198     0001600001000020019                  00035     00007           AA2
421380198               00023300000200024002196300063900119902024000110001 82AA3
421380198    000511                  007600170000218                         AA4
4213801980019404     152000          0000207009009405003                     AA5
421380198                                                                    AA6
42138019880330003000041200010170507000102000A7 EMISSION RECORDED             AA7
```

Figure AST2-4 - continued. Sample Output
(Page 2 of 8)

```
147840    0000000000000011CG07475
147840    0000000000000071CG07411101PARTICULATES    U         42602NITROGEN OXIDESU
147840    0000000000000071CG07442401SULFUR DIOXIDE U          43101HYDROCARBONS    U
147840    0000000000000071CG07442101CARBON MONOXIDEU
147840    0000000000000051CG07400197000300100001500055
147840    0000000000000031CG074                              06380311093043
147840    0000000100100011CA074RESIDENT ANTHRACITE COAL    000000001
147840    0000000100100051CA07411101             F                    PARTICULATES
147840    0000000100100051CA07442602             F                    NITROGEN OXIDES
147840    0000000100100051CA07442401             F                    SULFUR DIOXIDE
147840    0000000100100051CA07443101             F                    HYDROCARBONS
147840    0000000100100051CA07442101             F                    CARBON MONOXIDE
147840    0000000200100011CA074RESIDENT BITUMINOUS COAL    000000101
147840    0000000200100051CA07411101             F                    PARTICULATES
147840    0000000200100051CA07442602             F                    NITROGEN OXIDES
147840    0000000200100051CA07442401             F                    SULFUR DIOXIDE
147840    0000000200100051CA07443101             F                    HYDROCARBONS
147840    0000000200100051CA07442101             F                    CARBON MONOXIDE
147840    0000000300100011CA074RESIDENT DISTILLATE OIL     000000137
147840    0000000300100051CA07411101             F                    PARTICULATES
147840    0000000300100051CA07442602             F                    NITROGEN OXIDES
147840    0000000300100051CA07442401             F                    SULFUR DIOXIDE
147840    0000000300100051CA07443101             F                    HYDROCARBONS
147840    0000000300100051CA07442101             F                    CARBON MONOXIDE
147840    0000000500100011CA074RESIDENTIAL NATURAL GAS     000000042
147840    0000000500100051CA07411101             F                    PARTICULATES
147840    0000000500100051CA07442602             F                    NITROGEN OXIDES
147840    0000000500100051CA07442401             F                    SULFUR DIOXIDE
147840    0000000500100051CA07443101             F                    HYDROCARBONS
147840    0000000500100051CA07442101             F                    CARBON MONOXIDE
147840    0000000800100011CA074COMM-INST BITUMINOUS COAL   000000003
147840    0000000800100051CA07411101             F                    PARTICULATES
147840    0000000800100051CA07442602             F                    NITROGEN OXIDES
147840    0000000800100051CA07442401             F                    SULFUR DIOXIDE
147840    0000000800100051CA07443101             F                    HYDROCARBONS
147840    0000000800100051CA07442101             F                    CARBON MONOXIDE
147840    0000000900100011CA074COMM-INST DISTILLATE OIL    000000023
147840    0000000900100051CA07411101             F                    PARTICULATES
147840    0000000900100051CA07442602             F                    NITROGEN OXIDES
147840    0000000900100051CA07442401             F                    SULFUR DIOXIDE
147840    0000000900100051CA07443101             F                    HYDROCARBONS
147840    0000000900100051CA07442101             F                    CARBON MONOXIDE
147840    0000001000100011CA074COMM-INST RESIDUAL OIL      000000031
147840    0000001000100051CA07411101             F                    PARTICULATES
147840    0000001000100051CA07442602             F                    NITROGEN OXIDES
147840    0000001000100051CA07442401             F                    SULFUR DIOXIDE
```

Figure AST2-4 - continued. Sample Output
(Page 3 of 8)

```
                    EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE     1

     PROGRAM NAME: CSRINTR (EC0050)
     REVISION LEVEL: 1-00
     LAST UPDATE #: A-1
     DATE INCORPORATED: FEBRUARY 1, 1980


     NUMBER OF INPUT TRANSACTIONS READ:                          2,089
     NUMBER OF TRANSACTIONS WRITTEN:                             2,090
```

Figure AST2-4 - continued. Sample Output
(Page 4 of 8)

```
                                    EMISSION FACTOR INSERTION PROGRAM                                      PAGE   1


PROGRAM NAME: CMSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980



OPTIONS IN EFFECT:  NOFLAGW

          FIELDS SELECTED FOR INSERTIONS:  NIT  SUL  ASH  EMISSION  CONF  SPEC

          FIELDS TO BE OVERRIDDEN:  NIT  SUL  ASH  EMISSION  CONF  SPEC



NITROGEN I  O  SULFUR I  O  ASH I  O  EMISSION FACTOR I  O  CONF LEVEL I  O  SPEC DATA I  O    DATE: CATEGORY   N    POLLUTANT   N



          *** CMSEFIN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64



NUMBER OF INPUT TRANSACTIONS:                        2,090
NUMBER OF EMISSION FACTOR RECORDS READ:                387
NUMBER OF STATE AND LOCAL INSERTIONS MADE:               0
NUMBER OF FEDERAL INSERTIONS MADE:                   1,685
NUMBER OF OUTPUT TRANSACTIONS:                       2,090
```

Figure AST2-4 - continued. Sample Output

(Page 5 of 8)

41

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```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                    PAGE     1
PROGRAM NAME: CFMMSTR (EC0070)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

   CONTROL DATE IS 80    ,  ERROR OPTION IS FLAGW  ,  LIST OPTION IS LIST




 --------------------------------------------------------------------------------------------




                  EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                   PAGE     2
NUMBER OF INPUT TRANSACTIONS READ:                       2,090
NUMBER OF DISASTERS DETECTED:                                0
NUMBER OF ABORTS DETECTED:                                   0
NUMBER OF ERRORS DETECTED:                                   0
NUMBER OF CONDITIONALS DETECTED:                             0
NUMBER OF WARNINGS DETECTED:                                 0
NUMBER OF TRANSACTIONS REJECTED:                             0
NUMBER OF AREA SOURCE FILE RECORDS READ IN:                  0
NUMBER OF AREA SOURCE FILE RECORDS WRITTEN OUT:            349
```

Figure AST2-4 - continued. Sample Output
(Page 6 of 8)

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#2

```
                     FIS/AS MASTER FILE MAINTENANCE PRUGKAM  -  INTERNAL TRANSACTIUN LISIING                       PAGE      1

00000000000000000000000000000000000000000000000000000000000000000000000000000000
147840     000000000000000011CG07475
147840     000000000000000031CG074                                 06380311093093
147840     000000000000000051CG07400197000300100001500055
147840     000000000000000061CG07416000567100081000826
147840     000000000000000061CG0742                                003098      0005303
147840     000000000000000071CG07442101CARBON MONOXIDEU
147840     000000000000000071CG07442401SULFUR DIOXIDE U        43101HYDROCARBONS    U
147840     000000000000000071CG07411101PARTICULATES   U        42602NITROGEN OXIDESU
147840     0000000000200001 NO74WABASH
147840     00000001001000011CA074RESIDENT ANTHRACITE COAL    000000001
147840     00000001001000041CA0740A7 EMISSION RECORDED              FFED
147840     00000001001000051CA07411101000001000000F             0000300PARTICULATES
147840     00000001001000051CA07411101000001000000F                    PARTICULATES
147840     00000001001000051CA07442101000009000000F                    CARBON MONOXIDE
147840     00000001001000051CA07442101000009000000F             0004000CARBON MONOXIDE
147840     00000001001000051CA07442401000003800000F             0000020SULFUR DIOXIDE
147840     00000001001000051CA07442401000003800000F                    SULFUR DIOXIDE
147840     00000001001000051CA07442602000000300000F                    NITROGEN OXIDES
147840     00000001001000051CA07442602000000300000F             0000150NITROGEN OXIDES
147840     00000001001000051CA07443101              F 0200000SUS0000250HYDROCARBONS
147840     00000001001000051CA07443101              F 0200000SUS       HYDROCARBONS
147840     00000002001000011CA074RESIDENT BITUMINOUS COAL    000000101
147840     00000002001000051CA07411101000002000000F                    PARTICULATES
147840     00000002001000051CA07442101000009000000F                    CARBON MONOXIDE
147840     00000002001000051CA07442401000003800000F                    SULFUR DIOXIDE
147840     00000002001000051CA07442602000000300000F                    NITROGEN OXIDES
147840     00000002001000051CA07443101              F 0025000SUS       HYDROCARBONS
147840     00000003001000011CA074RESIDENT DISTILLATE OIL     000000137
147840     00000003001000051CA07411101000000250000F                    PARTICULATES
147840     00000003001000051CA07442101000000500000F                    CARBON MONOXIDE
147840     00000003001000051CA07442401000014400000F                    SULFUR DIOXIDE
147840     00000003001000051CA07442602000001800000F                    NITROGEN OXIDES
147840     00000003001000051CA07443101              F 0169000SUS       HYDROCARBONS
147840     00000005001000011CA074RESIDENTIAL NATURAL GAS     000000042
147840     00000005001000041CA0740A7 EMISSION RECORDED              FFED
147840     00000005001000051CA07411101000001000000F             0000300PARTICULATES
147840     00000005001000051CA07411101000001000000F                    PARTICULATES
147840     00000005001000051CA07442101000002000000F                    CARBON MONOXIDE
147840     00000005001000051CA07442101000002000000F             0004000CARBON MONOXIDE
147840     00000005001000051CA07442401000000060000F             0000020SULFUR DIOXIDE
147840     00000005001000051CA07442401000000060000F                    SULFUR DIOXIDE
147840     00000005001000051CA07442602000008000000F                    NITROGEN OXIDES
147840     00000005001000051CA07442602000008000000F             0000150NITROGEN OXIDES
147840     00000005001000051CA07443101              F 0250000SUS0000250HYDROCARBONS
147840     00000005001000051CA07443101              F 0250000SUS       HYDROCARBONS
147840     00000008001000011CA074COMM-INST BITUMINOUS COAL   000000003
```

Figure AST2-4 - continued. Sample Output

(Page 7 of 8)

```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  NEW MASTER FILE LISTING                        PAGE     1

147840     000000000000000565074CG75
147840     000000000020000136074 NWABASH
147840     000000010010000604074CARESIDENT ANTHRACITE COAL    000000001
147840     000000020010000604074CARESIDENT BITUMINOUS COAL    000000101
147840     000000030010000604074CARESIDENT DISTILLATE OIL     000000137
147840     000000050010000604074CARESIDENTIAL NATURAL GAS     000000042
147840     000000080010000604074CACOMM-INST BITUMINOUS COAL   000000003
147840     000000090010000604074CACOMM-INST DISTILLATE OIL    000000023
147840     000000100010000604074CACOMM-INST RESIDUAL OIL      000000031
147840     000000110010000604074CACOMM-INST NATURAL GAS       000000012
147840     000000140010000604074CAINDUSTRY BITUMINOUS COAL    000000037
147840     000000160010000604074CAINDUSTRIAL DISTILLATE OIL   000000011
147840     000000170010000604074CAINDUSTRIAL RESIDUAL OIL     000000030
147840     000000180010000604074CAINDUSTRIAL NATURAL GAS      000000007
147840     000000210010000604074CARES. ON-SITE INCINERATION   000000947
147840     000000270010000604074CALT DUTY GAS VEH LM ACC RD
147840     000000280010000604074CALT DUTY GAS VEH RURAL RD
147840     000000290010000604074CALT DUTY GAS VEH SUBURB RD
147840     000000300010000604074CALT DUTY GAS VEH URBAN RD
147840     000000310010000604074CAMED DUTY GAS VEH LM AC RD
147840     000000320010000604074CAMED DUTY GAS VEH RURAL RD
147840     000000330010000604074CAMED DUTY GAS VEH SUBUR RD
147840     000000340010000604074CAMED DUTY GAS VEH URBAN RD
147840     000000350010000604074CAHVY DUTY GAS VEH LM AC RD
147840     000000360010000604074CAHVY DUTY GAS VEH RURAL RD
147840     000000370010000604074CAHVY DUTY GAS VEH SUBUR RD
147840     000000380010000604074CAHVY DUTY GAS VEH URBAN RD
147840     000000390010000604074CAOFF HIGHWAY GAS VEHICLES    000000652
147840     000000400010000604074CAHVY DUTY DIESEL VEH LACRD
147840     000000410010000604074CAHVY DUTY DIESEL VEH RURRD
147840     000000420010000604074CAHVY DUTY DIESEL VEH SUBRD
147840     000000430010000604074CAHVY DUTY DIESEL VEH URBRD
147840     000000440010000604074CAOFF HIGHWAY DIESEL VEH      000000001
147840     000000450010000604074CARAILROAD LOCOMOTIVES        000000121
147840     000000470010000604074CACIVIL AIRCRAFT LTO"S        000000365
147840     000000490010000604074CA
147840     000000520010000604074CAGASOLINE VESSELS            000000267
147840     000000530010000604074CASOLVENT PURCHASED           000000525
147840     000000540010000604074CAGASOLINE MARKETED           000000089
147840     000000550010000604074CAUNPAVED ROAD TRAVEL         000000005
147840     000000570010000604074CACONSTRUCTION                000000087
147840     000000580010000604074CAMISC WIND EROSION           000000099
147840     000000590010000604074CALAND TILLING                000000224
147840     000000600010000604074CAFOREST WILD FIRES                        0000012
147840     000000640010000604074CASTRUCTURAL FIRES            000000052
147860     000000000000000565065CG75
147860     000000000020000136065 NWARREN
```

Figure AST2-4 - continued. Sample Output

(Page 8 of 8)

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EIS/AS Test 3

Update the Master File Using EIS/AS Transactions

In this test run, the EIS/AS master file created in Test 2 is updated with EIS/AS transactions using the cataloged procedure ECEMM10 which executes CEDMSTR (EC0040), the master file transaction edit program; CSRINTR (EC0050), the master file internal transaction sort program; CMSEFIN (EC0060), the master file internal transaction emission factor insertion program; and CFMMSTR (EC0070), the master file maintenance program.

CEDMSTR (EC0040) edits EIS/AS master file transactions and converts those that pass the edit criteria into internal transactions.

There are four types of input EIS/AS master file transactions: description, category, NEDS comment, and EIS/AS comment. See Figure AST3-1 for the EIS/AS master file transaction formats and Figure AST3-2 for the master file transaction load sheets. Description transactions are used to add, change, or delete description records for counties or suballocations of counties. Category transactions are used to add, change, or delete aggregate or disaggregate category records for counties or suballocations of counties. EIS/AS comment transactions are used to add, change, or delete EIS/AS comment records.

To add a description record (either county or suballocation) to the master file, the user enters at least one of the seven description transactions. Note that a county description record must be present in the input transaction file or input master file before any other records (including the suballocation description record) will be accepted for that county. A category record (or category disaggregation record) can be added by entering at least one of the five category transactions, provided that a description record is present in the input transaction file or input master file for the same geographic area. In order to add a comment record, the user enters one or more of the EIS/AS comment transactions. However, comment records will only be added if there is a record in the master file (description or category) with matching key information, including state, county, geographic suballocation number, category number, and category disaggregation number.

To change a non-key field in a master file record, the user enters the appropriate transaction; i.e., a description 1 through 7, category 1 through 5, NEDS comment or EIS/AS comment transaction, with the same key information as the master file record to be changed. Also, this transaction must have an action code of 'C' and contain the new information for the field to be changed. If these requirements are met, the non-blank, non-key fields of the transaction will replace the corresponding fields in the master file record. A change transaction with an asterisk in the first position of an optional (or non-key) field will cause that field in the master file to be flagged for deletion and change the first character in the field to an asterisk.

Similarly, the deletion of a master file record requires that the user enter a transaction with the same key information as the master file record to be deleted. However, the transaction must also have an action code of 'D' and the remaining fields should contain blanks. It should be noted that the records are flagged for deletion as a result of this test run but are not actually deleted. When a record is flagged for deletion, all its subordinate records are also flagged for deletion.

The options in this program are used to determine if the year in the description 1 transaction is valid, if the warning messages are to be printed in the diagnostic report, and if the input EIS/AS transactions and the output internal transactions should be printed. A two-digit year must be specified in card columns 1 and 2 of the option card in order to edit the year field in the description 1 transaction (the year on the transaction must not be greater than the year on the option card). If the warning messages are to be printed in the diagnostic report, the word FLAGW must appear in card columns 4 through 8. If the FLAGW option is not specified, the default, NOFLAGW, will be in effect and the warning messages will not be printed. In order for the input transactions and the output internal transactions to be printed, the word LIST must appear in card columns 12 through 15 of the option card; otherwise, the default, NOLIST, will be in effect and the listings will not be produced.

The programs CSRINTR (EC0050), CMSEFIN (EC0060) and CFMMSTR (EC007C) were used in Test 2 to create an EIS/AS master file from NEDS area source transactions. For a description of these programs refer to Test 2.

The run stream for this test run contains the JCL necessary for updating the EIS/AS master file. This run stream is shown in Figure AST3-3. It does not show all the input master file transactions in the run stream, but it does show the necessary JCL.

The cataloged procedure executed by this run stream is ECEMM10. Through the use of substitutable parameters, the input emission factor file is specified as ECEMFL1 (created in Test 1), the input master file is specified as ECMSTR1 (created in Test 2), and the updated master file is named ECMSTR2. For the EDIT step, the user must supply the DD (data definition) information for the option card file and the input EIS/AS master file transaction file. The options specified for the EDIT step are 80, FLAGW, and LIST. Also, the user must supply the DD information for the option card file in the INSERT step and the option card file in the UPDATE step. The options specified for the INSERT step in this test run are: FLAGW, NIT I, SUL I, ASH I, EMISSION I, CONF I, SPEC I, CDAT 77001, and PDAT 77001. The options specified for the UPDATE step are 80 and FLAGW. Figure AST3-4 shows the sample output produced by this run stream.

Category 1 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 17	3	Numeric	Category Number
18 - 19	2	Numeric	Category Disaggregation Number
20 - 44	25	Alphanumeric	Category Description
45 - 46	2	Numeric	Year of Information
47 - 55	9	Numeric	Process Rate
56 - 62	7	Numeric	Category Adjustment Value
63 - 64	2	Numeric	Units Code
65 - 76	12	Alphanumeric	Units Code Description
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	Disaggregation Type
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

(Page 1 of 18)

Figure AST3-1. EIS/AS Master File Transaction Formats

Category 2 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 17	3	Numeric	Category Number
18 - 19	2	Numeric	Category Disaggregation Number
20	1	Alphabetic	Uniform Monthly Thruput
21 - 22	2	Numeric	Thruput for January
23 - 24	2	Numeric	Thruput for February
25 - 26	2	Numeric	Thruput for March
27 - 28	2	Numeric	Thruput for April
29 - 30	2	Numeric	Thruput for May
31 - 32	2	Numeric	Thruput for June
33 - 34	2	Numeric	Thruput for July
35 - 36	2	Numeric	Thruput for August
37 - 38	2	Numeric	Thruput for September
39 - 40	2	Numeric	Thruput for October
41 - 42	2	Numeric	Thruput for November
43 - 44	2	Numeric	Thruput for December
45 - 46	2	Numeric	Hours Per Day
47	1	Numeric	Days Per Week
48 - 49	2	Numeric	Weeks Per Year
50 - 53	4*	Numeric	Thruput Ratio

---

*A one-digit decimal position is assumed; e.g., 21.2 would be coded as '0212'.

(Page 2 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 2 Transaction (continued)

Column #	Field Length	Data Type	Description
54 - 63	10*	Numeric	Maximum Hourly Thruput
64	1	Numeric	Data Confidence Rating
65 - 67	3**	Numeric	Nitrogen Percentage
68 - 69	2***	Numeric	Sulfur Percentage
70 - 72	3****	Numeric	Ash Percentage
73 - 76	4	Alphanumeric	Heat Content
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	Disaggregation Type
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

---

*A three-digit decimal position is assumed; e.g., 350.0 would be coded as '0000350000'.

**A three-digit decimal position is assumed; e.g., 0.02 would be coded as '020'.

***A one-digit decimal position is assumed; e.g., 1.3 would be coded as '13'.

****A one-digit decimal position is assumed; e.g., 7.3 would be coded as '073'.

(Page 3 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 3 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 17	3	Numeric	Category Number
18 - 19	2	Numeric	Category Disaggregation Number
20	1	Alphabetic	Uniform Hourly Thruput
21 - 22	2	Numeric	Thruput for Hour Beginning 0000
23 - 24	2	Numeric	Thruput for Hour Beginning 0100
25 - 26	2	Numeric	Thruput for Hour Beginning 0200
27 - 28	2	Numeric	Thruput for Hour Beginning 0300
29 - 30	2	Numeric	Thruput for Hour Beginning 0400
31 - 32	2	Numeric	Thruput for Hour Beginning 0500
33 - 34	2	Numeric	Thruput for Hour Beginning 0600
35 - 36	2	Numeric	Thruput for Hour Beginning 0700
37 - 38	2	Numeric	Thruput for Hour Beginning 0800
39 - 40	2	Numeric	Thruput for Hour Beginning 0900
41 - 42	2	Numeric	Thruput for Hour Beginning 1000
43 - 44	2	Numeric	Thruput for Hour Beginning 1100
45 - 46	2	Numeric	Thruput for Hour Beginning 1200
47 - 48	2	Numeric	Thruput for Hour Beginning 1300
49 - 50	2	Numeric	Thruput for Hour Beginning 1400
51 - 52	2	Numeric	Thruput for Hour Beginning 1500

(Page 4 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 3 Transaction (continued)

Column #	Field Length	Data Type	Description
53 - 54	2	Numeric	Thruput for Hour Beginning 1600
55 - 56	2	Numeric	Thruput for Hour Beginning 1700
57 - 58	2	Numeric	Thruput for Hour Beginning 1800
59 - 60	2	Numeric	Thruput for Hour Beginning 1900
61 - 62	2	Numeric	Thruput for Hour Beginning 2000
63 - 64	2	Numeric	Thruput for Hour Beginning 2100
65 - 66	2	Numeric	Thruput for Hour Beginning 2200
67 - 68	2	Numeric	Thruput for Hour Beginning 2300
69 - 76	8		Unused
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	Disaggregation Type
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

(Page 5 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 4 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 17	3	Numeric	Category Number
18 - 19	2	Numeric	Category Disaggregation Number
20 - 53	34	Alphanumeric	NEDS A7 Comment
54	1	Alphanumeric	Information Source Code
55 - 74	20	Alphanumeric	Information Source Narrative
75 - 76	2		Unused
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	Disaggregation Type
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

(Page 6 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 5 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 17	3	Numeric	Category Number
18 - 19	2	Numeric	Category Disaggregation Number
20 - 24	5	Numeric	Pollutant ID
25 - 34	10*	Numeric	Emission Factor
35	1	Numeric	Emission Factor Confidence Rating
36	1	Alphabetic	Emission Factor Origin
37	1	Alphanumeric	Emission Factor Source Code
38 - 47	10	Alphanumeric	Pollutant-Specific Data
48 - 54	7	Numeric	NEDS A7 Emission
55 - 69	15	Alphanumeric	Pollutant Name
70 - 76	7		Unused
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	Disaggregation Type
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

---

*A three-digit decimal position is assumed; e.g., 10.35 would be coded as '0000010350'.

(Page 7 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 1 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 16	2	Numeric	Year
17 - 19	3	Numeric	Day
20 - 22	3	Numeric	Air Basin
23 - 26	4	Numeric	SMSA
27 - 46	20	Alphanumeric	Area Name
47 - 66	20	Alphanumeric	Major Activity
67 - 70	4	Alphanumeric	Associated Plant ID
71 - 72	2	Numeric	SIP Base Year
73 - 74	2	Numeric	Projected Year
75 - 76	2	Numeric	Rural Population Percentage
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	G Code
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

(Page 8 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 2 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 22	8	Numeric	Population
23 - 76	54	Alphanumeric	AQCR Name
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	G Code
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

(Page 9 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 3 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 16	2	Numeric	Suballocation Technique Code
17 - 36	20	Alphanumeric	Suballocation Technique Description
37 - 39	3	Numeric	Defined Area Code
40 - 41	2*	Numeric	Sulfur Content - Anthracite Coal
42 - 43	2*	Numeric	Sulfur Content - Bituminous Coal
44 - 45	2*	Numeric	Sulfur Content - Distillate Oil
46 - 47	2*	Numeric	Sulfur Content - Residual Oil
48 - 50	3**	Numeric	Ash Content - Anthracite Coal
51 - 53	3**	Numeric	Ash Content - Bituminous Coal
54 - 55	2	Numeric	UTM Zone 1

---

*A one-digit decimal position is assumed; e.g., 1.5 would be coded as '15'.

**A one-digit decimal position is assumed; e.g., 7.3 would be coded as '073'.

(Page 10 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 3 Transaction (continued)

Column #	Field Length	Data Type	Description
56 - 59	4*	Numeric	UTM Horizontal 1
60 - 64	5**	Numeric	UTM Vertical 1
65 - 66	2	Numeric	UTM Zone 2
67 - 70	4*	Numeric	UTM Horizontal 2
71 - 75	5**	Numeric	UTM Vertical 2
76	1		Unused
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	G Code
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

---

*A one-digit decimal position is assumed; e.g., 67.0 would be coded as '0670'.

**A one-digit decimal position is assumed; e.g., 4762.4 would be coded as '47624'.

(Page 11 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 4 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 16	2	Numeric	UTM Zone 3
17 - 20	4*	Numeric	UTM Horizontal 3
21 - 25	5**	Numeric	UTM Vertical 3
26 - 27	2	Numeric	UTM Zone 4
28 - 31	4*	Numeric	UTM Horizontal 4
32 - 36	5**	Numeric	UTM Vertical 4
37 - 38	2	Numeric	UTM Zone 5
39 - 42	4*	Numeric	UTM Horizontal 5
43 - 47	5**	Numeric	UTM Vertical 5
48 - 49	2	Numeric	UTM Zone 6
50 - 53	4*	Numeric	UTM Horizontal 6
54 - 58	5**	Numeric	UTM Vertical 6
59	1	Alphanumeric	Source Type
60 - 66	7***	Numeric	Length or Area

---

*A one-digit decimal position is assumed; e.g., 67.0 would be coded as '0670'.

**A one-digit decimal position is assumed; e.g., 4762.4 would be coded as '47624'.

***A two-digit decimal position is assumed; e.g., 193.4 would be coded as '0019340'.

(Page 12 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 4 Transaction (continued)

Column #	Field Length	Data Type	Description
67 - 68	2	Numeric	Length or Area Units Code
69 - 76	8		Unused
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	G Code
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

(Page 13 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 5 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 19	5	Numeric	SIP Estimate for TSP
20 - 23	4	Numeric	SIP Estimate for SO_2
24 - 27	4	Numeric	SIP Estimate for NO_X
28 - 32	5	Numeric	SIP Estimate for HC
33 - 37	5	Numeric	SIP Estimate for CO
38 - 76	39		Unused
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	G Code
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

(Page 14 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 6 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15	1	Numeric	Subcard Number
16	1	Numeric	Population Code
17 - 23	7	Numeric	Gas Fuel for Light Vehicles
24 - 29	6	Numeric	Gas Fuel for Heavy Vehicles
30 - 35	6	Numeric	Diesel Fuel for Heavy Vehicles
36 - 41	6	Numeric	Vehicle Miles for Limited Access Roads
42 - 47	6	Numeric	Vehicle Miles for Rural Roads
48 - 53	6	Numeric	Vehicle Miles for Suburban Roads
54 - 60	7	Numeric	Vehicle Miles for Urban Roads
61 - 76	16		Unused
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	G Code
79	1	Numeric	Card Type
80	1	Alphabetic	Action Code

(Page 15 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 7 Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 19	5	Numeric	Pollutant ID
20 - 34	15	Alphanumeric	Pollutant Name
35	1	Alphabetic	Attainment Status
36 - 41	6	Alphanumeric	AQMA Number
42	1		Unused
43 - 69	27		Repeat Columns 15-41
70 - 76	7		Unused
77	1	Alphabetic	Suballocation Type
78	1	Alphabetic	G Code
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

(Page 16 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

NEDS Comment Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 77	68	Alphanumeric	NEDS A6 Comment
78	1	Alphabetic	N Code
79	1	Numeric	Card Type
80	1	Alphabetic	Action Code

(Page 17 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

EIS/AS Comment Transaction

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	State
3 - 6	4	Numeric	County
7 - 9	3	Numeric	AQCR
10 - 14	5	Numeric	Geographic Suballocation Number
15 - 17	3	Numeric	Category Number
18 - 19	2	Numeric	Category Disaggregation Number
20 - 22	3	Numeric	Line Number
23 - 72	50	Alphanumeric	Half Comment
73 - 77	5		Unused
78	1	Alphabetic	R Code
79	1	Numeric	Card Number
80	1	Alphabetic	Action Code

(Page 18 of 18)

Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

AGENCY__________

EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
DESCRIPTION TRANSACTIONS 1-6

BY __________

DATE __________

PAGE __ OF ____

STATE	COUNTY	AQCR	SUBALLOC NBR
1	3	7	10 14

DATE YR	DATE DAY	AIR BASIN	SMSA	GEOGRAPHIC NAME	MAJOR ACTIVITY	ASSOC PLANT ID	SIP BASE YR	PROJ YR	% RUR	C/S		NBR	ACTION
15	17	20	23	27	47	67	71	73	75	77	78	79	80
											G	1	

POPULATION	AQCR NAME	C/S		NBR	ACTION
15	23	77	78	79	80
			G	2	

SUB TECH	SUBALLOCATION TECHNIQUE DESCRIPTION	DEF AREA CODE	SULFUR CONTENTS ANTH COAL	SULFUR CONTENTS BITM COAL	SULFUR CONTENTS DIST OIL	SULFUR CONTENTS RESID OIL	ASH CONTENTS ANTH COAL	ASH CONTENTS BITUM COAL	UTM COORDINATES ZONE 1	HORIZ 1	VERT 1	ZONE 2	HORIZ 2	VERT 2	C/S		NBR	ACTION
15	17	37	40	42	44	46	48	51	54	56	60	65	67	71	77	78	79	80
			▲	▲	▲	▲	▲	▲		▲	▲		▲	▲		G	3	

UTM COORDINATES ZONE 3	HORIZ 3	VERT 3	ZONE 4	HORIZ 4	VERT 4	ZONE 5	HORIZ 5	VERT 5	ZONE 6	HORIZ 6	VERT 6	SOURCE	LENGTH OF LINE, LINK, OR AREA	LLA UNITS CODE	C/S		NBR	ACTION
15	17	21	26	28	32	37	39	43	48	50	54	59	60	67	77	78	79	80
	▲	▲		▲	▲		▲	▲		▲	▲		▲			G	4	

SIP ESTIMATES TSP	SO2	NOX	HC	CO		C/S		NBR	ACTION
15	20	24	28	33	37	77	78	79	80
							G	5	

SUB CD	POP CD	LIGHT VEHICLE GAS	HEAVY VEHICLE GAS	HEAVY VEHICLE DIESEL	LIMITED ACCESS ROADS/MVM	RURAL ROADS MVM	SUBURBAN ROADS/MVM	URBAN ROADS MVM		C/S		NBR	ACTION
15	16	17	24	30	36	42	48	54	60	77	78	79	80
											G	6	

Figure AST3-2. EIS/AS Master File Transaction Load Sheets

(Page 1 of 5)

BEST DOCUMENT AVAILABLE

AGENCY__________

EMISSIONS INVENTORY [illegible]EM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
DESCRIPTION TRANSACTION 7

BY __________
DATE __________
PAGE ____ OF __________

STATE	COUNTY	AQCR	SUBALLOC NBR
1	3	7	10 14

POLLUTANT ID	POLLUTANT NAME	ATTN	AQMA NUMBER		POLLUTANT ID	POLLUTANT NAME	ATTN	AQMA NUMBER		C/S		NBR	ACTION
15	20	35	36 41		43	48	63	64 69		77	78	79	80
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	
											G	7	

Figure AST3-2 - continued. EIS/AS Master File Transaction Load Sheets
(Page 2 of 5)

BEST DOCUMENT AVAILABLE

AGENCY ____________

EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
CATEGORY TRANSACTIONS

BY ____________
DATE ____________
PAGE ___ OF ______

STATE	COUNTY	AQCR	SUBALLOC NBR	CATEG NBR	DISAG NBR
1	3	7	10	15	18

CATEGORY DESCRIPTION	YEAR	PROCESS RATE	CATEGORY ADJUSTMENT	UNIT CODE	UNITS CODE DESCRIPTION	C/S	A/D	NBR	ACTION
20	45	47	56	63	65	77	78	79	80
								1	

UNIF M	MONTHLY THRUPUT PERCENTAGE JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	HRS PER DAY	DPERWK	WKS PER YR	THRUPUT RATIO	MAXIMUM HOURLY THRUPUT	CONF	NITRO CONT	SULF CONT	ASH CONT	HEAT CONTENT	C/S	A/D	NBR	ACTION
20	21	23	25	27	29	31	33	35	37	39	41	43	45	47	48	50	54	64	65	68	70	73	77	78	79	80
																									2	

UNIF HR	HOURLY THRUPUT PERCENTAGE 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		C/S	A/D	NBR	ACTION
20	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67		77	78	79	80
																												3	

NEDS A7 COMMENT	SOURCE	SOURCE OF INFORMATION NARRATIVE		C/S	A/D	NBR	ACTION
20	54	55 74		77	78	79	80
						4	

POLLUTANT ID	EMISSION FACTOR	CONF	ORG	SRC	POLLUTANT SPECIFIC DATA	NEDS A7 EMISSION	POLLUTANT NAME		C/S	A/D	NBR	ACTION
20	25	35	36	37	38	48	55 69		77	78	79	80
											5	
											5	
											5	
											5	
											5	
											5	
											5	
											5	
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											5	
											5	
											5	
											5	
											5	

(Page 3 of 5)

Figure AST3-2 - continued. EIS/AS Master File Transaction Load Sheets

BEST DOCUMENT AVAILABLE

AGENCY______________

EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
NEDS A6 COMMENT

BY______________
DATE______________
PAGE____OF______________

STATE	COUNTY	AQCR	NEDS A6 COMMENT			ACTION
1	3	7	10	78	79	80
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	
				N	O	

Figure AST3-2 - continued. EIS/AS Master File Transaction Load Sheets
(Page 4 of 5)

BEST DOCUMENT AVAILABLE

AGENCY______________

EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
COMMENT TRANSACTIONS

BY______________
DATE______________
PAGE___OF______________

STATE 1	COUNTY 3	AQCR 7	SUBALLOC NBR 10	CATEG NBR 15	DISAG NBR 18

LINE NBR 20	HALF COMMENT 23 … 72		78	NBR 79	ACTION 80
			R		
			R		
			R		
			R		
			R		
			R		
			R		
			R		
			R		
			R		
			R		
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			R		
			R		

(Page 5 of 5)

Figure AST3-2 - continued. EIS/AS Master File Transaction Load Sheets

```
//ASTES103 JOB     (ACCOUNTING INFO)
//*
//*   UPDATE THE EIS/AS MASTER FILE USING EIS/AS TRANSACTIONS
//*
//TES103A  EXEC ECEMM10,
//        EMFCFIL=ECEMFL1,
//        OLDMSTR=ECMSTR1,
//        NEWMSTR=ECMSTR2
//*
//*   UPDATE THE MASTER FILE FROM TEST 2 WITH EIS/AS TRANSACTIONS
//*
//EDIT.INPUT DD *
061280067000007379                                                  SG1A
06128006700000                                                      SG2A
06128006700000                    31012020402303                    SG3A
06128006700000                                                      SG4A
0612800670000011111111111122222223333                               SG5A
06128006700000  0023450  9500050097500005032150000987501            SG6A
0612800670000042101CARBON MONOXIDEU  42401SULFUR DIOXIDE U          CG7A
0612800670000043101HYDROCARBONS   U  11101PARTICULATES   U          CG7A
0612800670000042602NITROGEN OXIDESU                                 CG7A
061280067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OF CATEGORIES   NOA
0612800670000179                                                    SG1A
06128006700001                                                      SG2A
06128006700001                    31012020402303                    SG3A
06128006700001                                                      CG4A
061280067000011111122222233333444444                                SG5A
06128006700001  0012345  9500050097500005032150000987501            SG6A
06128006700500                                                      SG1A
06128006700500                                                      CG2A
06128006700500                    22021010505222                    SG3A
06128006700500                                                      SG4A
061280067005001111122222233333444444                                SG5A
06128006700500                                                      SG6A
0612800670061179                                                    SG1A
06128006700611                                                      SG2A
06128006700611                    31012020402303                    SG3A
06128006700611                                                      SG4A
06128006700611                                                      SG4A
06128006700611                                                      SG5A
06128006700611                                                      SG6A
0612800679999979                                                    SG1A
```

(Remainder of transactions omitted)

```
//EDIT.OPTIONS DD *
RO FLAGW   LIST
//INSERT.OPTIONS DD *
FLAGW   NIT I  SUL I  ASH I  EMISSION I  CONF I  SPEC I  CDAT 77001 PDAT 77001
//UPDATE.OPTIONS DD *
RO FLAGW
```

Figure AST3-3. Run Stream

```
                                        EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                        PAGE      1
PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT: CONTROL YEAR 80   FLAGW     LIST

061280067000007374                                                  SG1A                                    REF:       1
      B E
       *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
       *** CEDMSTR 030 ERROR - COLUMN 17 - INVALID DAY, REPLACING SPACES

06128006700000                                                      SG2A                                    REF:       2
       *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
       *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

06128006700000                        31012020402303                SG3A                                    REF:       3
                                      BE  BE  B EB E
       *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
       *** CEDMSTR 040 CONDITIONAL - COLUMN 40 - SULFUR-ANTHRACITE COAL OUT OF RANGE
       *** CEDMSTR 044 CONDITIONAL - COLUMN 44 - SULFUR-DISTILLATE OIL OUT OF RANGE
       *** CEDMSTR 046 CONDITIONAL - COLUMN 46 - ASH-ANTHRACITE COAL OUT OF RANGE
       *** CEDMSTR 050 CONDITIONAL - COLUMN 51 - ASH-BITUMINOUS COAL OUT OF RANGE

06128006700000                                                      SG4A                                    REF:       4
       *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
       *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

0612800670000011111111111222222233333                               SG5A                                    REF:       5
       *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED

06128006700000  0023450      95000500975000050321500000987501       SG6A                                    REF:       6
       *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED

06128006700001                                                      SG2A                                    REF:      12
       *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

06128006700001                        31012020402303                SG3A                                    REF:      13
                                      BE  BE  B EB E
       *** CEDMSTR 040 CONDITIONAL - COLUMN 40 - SULFUR-ANTHRACITE COAL OUT OF RANGE
       *** CEDMSTR 044 CONDITIONAL - COLUMN 44 - SULFUR-DISTILLATE OIL OUT OF RANGE
       *** CEDMSTR 046 CONDITIONAL - COLUMN 46 - ASH-ANTHRACITE COAL OUT OF RANGE
       *** CEDMSTR 050 CONDITIONAL - COLUMN 51 - ASH-BITUMINOUS COAL OUT OF RANGE

06128006700001                                                      CG4A                                    REF:      14
       *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED
       *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

06128006700500                                                      SG1A                                    REF:      17
     BE
       *** CEDMSTR 015 ERROR - COLUMN 15 - INVALID YEAR OF RECORD, CARD REJECTED
```

Figure AST3-4. Sample Output (Page 1 of 12)

BEST DOCUMENT AVAILABLE

```
                                   EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE      5
0612800670000100135                                             0          SD2A                                     REF:     251
            B
      *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800670000100199                                             0          SD2A                                     REF:     254
            B
      *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800670000100199MASTER FILE TEST DATA            5                      CD4A                                     REF:     255
      *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED

0612800670050000101MASTERFILE TEST DATA             5           0          CA4A                                     REF:     257
      *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED
      *** CEDMSTR 019 ERROR - AGGREGATE TRANSACTION WITH NONZERO DISAGGREGATE NUMBER, CARD REJECTED

0612800670050000122                                             0          SD2A                                     REF:     258
            B
      *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800670050000170                                             0          CD2A                                     REF:     263
            B
      *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED
      *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800670061100835                                             0          SD2A                                     REF:     266
            B
      *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800679999900199                                             0          SD2A                                     REF:     271
            B
      *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0622380670000002300                                             0          CA2A                                     REF:     274
            B
      *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0622380670000004700                                             0          CA2A                                     REF:     283
            B
      *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0622380670000006000                                             0          CA2A                                     REF:     291
            B
      *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

NUMBER OF INPUT TRANSACTIONS:          453
NUMBER OF VALID TRANSACTIONS:          429
NUMBER OF REJECTED TRANSACTIONS:        24
NUMBER OF TRANSACTIONS WRITTEN:        429
NUMBER OF WARNING MESSAGES:             33
NUMBER OF CONDITIONAL MESSAGES:         21
NUMBER OF ERROR MESSAGES:               30
NUMBER OF ABORT MESSAGES:                0
NUMBER OF DISASTER MESSAGES:             0
```

Figure AST3-4 - continued. Sample Output (Page 2 of 12)

```
                              EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                            PAGE     6
PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

Figure AST3-4 - continued. Sample Output (Page 3 of 12)

```
                                                     EIS/AS INPUT TRANSACTIONS                                  PAGE      1
0612800670000007379                                                                    SG1A                     REF:      1
061280067000000                                                                        SG2A                               2
061280067000000                             31012020402303                             SG3A                               3
061280067000000                                                                        SG4A                               4
0612800670000011111111111122222223333                                                  SG5A                               5
061280067000000  0023450       9500050097500005032150000987501                         SG6A                               6
06128006700000042101CARBON MONOXIDEU        42401SULFUR DIOXIDE U                      CG7A                               7
06128006700000043101HYDROCARBONS   U        11101PARTICULATES   U                      CG7A                               8
06128006700000042602NITROGEN OXIDESU                                                   CG7A                               9
06128006AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES                       NOA                              10
06128006700000179                                                                      SG1A                              11
061280067000001                                                                        SG2A                              12
061280067000001                             31012020402303                             SG3A                              13
061280067000001                                                                        CG4A                              14
06128006700000111111222222333334444444                                                 SG5A                              15
061280067000001  0012345       9500050097500005032150000987501                         SG6A                              16
061280067000500                                                                        SG1A                              17
061280067000500                                                                        CG2A                              18
061280067000500                             22021010505222                             SG3A                              19
061280067000500                                                                        SG4A                              20
06128006700500111112222222333334444444                                                 SG5A                              21
061280067000500                                                                        SG6A                              22
06128006700061179                                                                      SG1A                              23
061280067000611                                                                        SG2A                              24
061280067000611                             31012020402303                             SG3A                              25
061280067000611                                                                        SG4A                              26
061280067000611                                                                        SG4A                              27
061280067000611                                                                        SG5A                              28
061280067000611                                                                        SG6A                              29
06128006799999979                                                                      SG1A                              30
061280067999999                                                                        SG2A                              31
061280067999999                             10102222444333                             SG3A                              32
061280067999999                                                                        SG4A                              33
06128006799999222224444411111000033                                                    SG5A                              34
061280067999999  1234567                                                               SG6A                              35
06223806700000079                                                                      CG1A                              36
062238067000000                                                                        CG2A                              37
062238067000000                             33221144555666                             CG3A                              38
062238067000000                                                                        CG4A                              39
0622380670000011111333334444400002222                                                  CG5A                              40
062238067000000  0009876       9500050097500005032100009875012                         CG6A                              41
06223806AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES                       NOA                              42
0612800670000000100RESIDENT ANTHRACITE COAL 79000040123                                CA1A                              43
0612800670000000200RESIDENT BITUMINOUS COAL 79000020010                                CA1A                              44
0612800670000000300RESIDENT DISTILLATE OIL  79000009750                                CA1A                              45
0612800670000000400RESIDENTIAL RESIDUAL OIL 79000008900                                CA1A                              46
0612800670000000500RESIDENTIAL NATURAL GAS  79000023550                                CA1A                              47
0612800670000000600RESIDENTIAL WOOD         79000000050                                CA1A                              48
0612800670000000700COMM-INST ANTHRACITE COAL79000023500                                CA1A                              49
0612800670000000800COMM-INST BITUMINOUS COAL79000034750                                CA1A                              50
0612800670000000900COMM-INST DISTILLATE OIL 79000042100                                CA1A                              51
0612800670000001000COMM-INST RESIDUAL OIL   79000000390                                CA1A                              52
0612800670000001100COMM-INST NATURAL GAS    79000008750                                CA1A                              53
```

Figure AST3-4 - continued. Sample Output (Page 4 of 12)

BEST DOCUMENT AVAILABLE

75

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                                                        EIS/AS INPUT TRANSACTIONS                                                     PAGE      9
3100150110087686660100110, 20, 30, FURTHER SUBDIVISION LATER                           R2A                              REF:    425
3100150110087686601CAT 100 DISAG 10           7900123591200001312                      SD1A                                     426
3100150110087686601Y                          247520013          10876110200345D2A                                               427
3100150110087686601Y                                                                   SD3A                                     428
3100150110087686601                                      L LOCAL GOVRNMT               SD4A                                     429
31001501100876866011110100012413985LA                     TSP                          SD5A                                     430
31001501100876866011111400012411985LA                     WINDBLN PART                 SD5A                                     431
31001501100876866012230600012411985LA                     NITRATES                     SD5A                                     432
31001501100876866014210100012433985LA                     CO                           SD5A                                     433
31001501100876866014240100012013985LA                     SO2                          SD5A                                     434
31001501100876866014260100012019985LAJ/112-A              NO                           SD5A                                     435
31001501100876866014260300012017385LAJ/1188A              NOX                          SD5A                                     436
31001501100876866014310200012014485LA                     NONMETH HC                   SD5A                                     437
31001501100876866011110300012014495LA                     BENZENE ORGNICS              SD5A                                     438
31001501100876866012110100023014495LA                     TOTAL DUSTFALLS              SD5A                                     439
31001501100876866012240300023164495LA                     TSULFATES                    SD5A                                     440
31001501100876866014210200023177495LA                     CO2                          SD5A                                     441
31001501100876866014240200020007495LA                     HYDROGEN SULFDE              SD5A                                     442
31001501100876866014260200043007495LAS-JJJJ-55            NO2                          SD5A                                     443
31001501100876866014350200042007495LAS-JJJ5555            FORMALYHYDE                  SD5A                                     444
31001501100876866014310100042227495LAS-JJJ5555            HC                           SD5A                                     445
31001501100876866014310100333227495LAS-JJJ5555            HC                           SD5A                                     446
31001501100876866014410100000000000LAS                    TOTAL OXIDANTS               SD5A                                     447
31001501100876866014420100000000230LA                     OXONE                        SD5A                                     448
31001501100876     001AREA IS BOUNDED BY ROUTES 17,35,49, AND 1001A                     R1A                                     449
31001501100876     002THREE FACTORIES, ONE AIRSTRIP, ONE QUAARRY AND                    R1A                                     450
31001501100876     00215 FARMS INCLUDED, REST IS URBAN                                  R2A                                     451
3100150110087686601001CATEGORY IS BROKEN INTO THREE SUBALLOCATIONS                     R1A                                     452
3100150110087686660100110, 20, 30, FURTHER SUBDIVISION LATER                           R2A                                     453

NUMBER OF INPUT TRANSACTIONS:         453
NUMBER OF VALID TRANSACTIONS:         429
NUMBER OF REJECTED TRANSACTIONS:       24
```

Figure AST3-4 - continued. Sample Output (Page 5 of 12)

```
                                      EIS/AS EDITED TRANSACTIONS (INTERNAL TRANSACTION FORMAT)                          PAGE      3
061280     000000000000000071CG06742101CARBON MONOXIDE0        42401SULFUR DIOXIDE 0                                    REF:      7
061280     000000000000000071CG06743101HYDROCARBONS   0        11101PARTICULATES   0                                              8
061280     000000000000000071CG06742602NITROGEN OXIDES0                                                                           9
061280     000000000000200001 N067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES                                     10
061280     00001000000000011SG06779                                                                                             11
061280     00001000000000031SG067                          31012020402303                                                       13
061280     00001000000000051SG0671111122222333334444444                                                                         15
061280     00001000000000061SG067  0012345       950005009750000503215000098750l                                                16
061280     00500000000000031SG067                          22021010505222                                                       19
061280     00500000000000051SG0671111112222233333444444                                                                         21
061280     00611000000000011SG06779                                                                                             23
061280     00611000000000031SG067                          31012020402303                                                       25
061280     99999000000000011SG06779                                                                                             30
061280     99999000000000031SG067                          10102222444333                                                       32
061280     99999000000000051SG0672222224444411111000033                                                                         34
061280     99999000000000061SG067  1234567                                                                                      35
062238     00000000000000011CG06779                                                                                             36
062238     00000000000000031CG067                          33221144555666                                                       38
062238     00000000000000051CG0671111133333444440000 2222                                                                       40
062238     00000000000000061CG067  0009876       9500050097500005032100009875012                                                41
062238     000000000000200001 N067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES                                     42
061280     0000000100100011CA067RESIDENT ANTHRACITE COAL 79000040123                                                            43
061280     0000000200100011CA067RESIDENT BITUMINOUS COAL 79000020010                                                            44
061280     0000000300100011CA067RESIDENT DISTILLATE OIL  79000009750                                                            45
061280     0000000400100011CA067RESIDENTIAL RESIDUAL OIL 79000008900                                                            46
061280     0000000500100011CA067RESIDENTIAL NATURAL GAS  79000023550                                                            47
061280     0000000600100011CA067RESIDENTIAL WOOD         79000000050                                                            48
061280     0000000700100011CA067COMM-INST ANTHRACITE COAL79000023500                                                            49
061280     0000000800100011CA067COMM-INST BITUMINOUS COAL79000034750                                                            50
061280     0000000900100011CA067COMM-INST DISTILLATE OIL 79000042100                                                            51
061280     0000001000100011CA067COMM-INST RESIDUAL OIL   79000000390                                                            52
061280     0000001100100011CA067COMM-INST NATURAL GAS    79000008750                                                            53
061280     0000001200100011CA067COMM-INST WOOD           79000000005                                                            54
061280     0000001300100011CA067INDUSTRY ANTHRACITE COAL 79000098750                                                            55
061280     0000001400100011CA067INDUSTRY BITUMINOUS COAL 79000123400                                                            56
061280     0000001500100011CA067INDUSTRIAL COKE          79000009850                                                            57
061280     0000001600100011CA067INDUSTRIAL DISTILLATE OIL79000021500                                                            58
061280     0000001700100011CA067INDUSTRIAL RESIDUAL OIL  79000000980                                                            59
061280     0000001800100011CA067INDUSTRIAL NATURAL GAS   79000056900                                                            60
061280     0000001900100011CA067INDUSTRIAL WOOD          79000000025                                                            61
061280     0000002000100011CA067INDUSTRIAL PROCESS GAS   79000002350                                                            62
061280     0000000100100021CA067Y080809080809080809080809                            0                                          63
061280     0000000200100021CA067Y080809080809080809080809                            0                                          64
061280     0000000300100021CA067Y080809080809080809080809                            0                                          65
061280     0000000400100021CA067Y080809080809080809080809                            0                                          66
061280     0000000500100021CA067Y080809080809080809080809                            0                                          67
061280     0000000600100021CA067Y080809080809080809080809                            0                                          68
061280     0000000600100021CA067Y080809080809080809080809                            0                                          69
061280     0000000700100021CA067Y080809080809080809080809                            0                                          70
061280     0000000700100021CA067Y080809080809080809080809                            0                                          71
061280     0000000800100021CA067Y080809080809080809080809                            0                                          72
061280     0000000900100021CA067Y080809080809080809080809                            0                                          73
061280     0000001000100021CA067Y080809080809080809080809                            0                                          74
```

Figure AST3-4 - continued. Sample Output

(Page 6 of 12)

```
                         EIS/AS EDITED TRANSACTIONS (INTERNAL TRANSACTION FORMAT)                                PAGE      9
310015    0087600000200111 R011AREA IS BOUNDED BY ROUTES 17,35,49, AND 1001A                                  REF:      449
310015    0087600000200211 R011THREE FACTORIES, ONE AIRSTRIP, ONE QUARRY AND                                            450
310015    0087600000200221 R01115 FARMS INCLUDED, REST IS URBAN                                                         451
310015    0087686601200111 R011CATEGORY IS BROKEN INTO THREE SUBALLOCATIONS                                             452
310015    0087686601200121 R01110, 20, 30, FURTHER SUBDIVISION LATER                                                    453

NUMBER OF TRANSACTIONS WRITTEN:      429
```

```
               EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                PAGE     1

PROGRAM NAME: CSRINTR (EC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                              429
NUMBER OF TRANSACTIONS WRITTEN:                                 430
```

Figure AST3-4 - continued. Sample Output
(Page 7 of 12)

```
                                        EMISSION FACTOR INSERTION PROGRAM                                              PAGE    1


PROGRAM NAME: CMSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980



OPTIONS IN EFFECT:  FLAGW

          FIELDS SELECTED FOR INSERTIONS:  NIT  SUL  ASH  EMISSION  CONF  SPEC  CDAT 77001 PDAT 77001

          FIELDS TO BE OVERRIDDEN:  NONE



FLAGW   NIT I  SUL I  ASH I  EMISSION I  CONF I  SPEC I  CDAT 77001 PDAT 77001


          *** CMSEFIN 022 ERROR - NO VALID OVERRIDES SPECIFIED - NO OVERRIDES ASSUMED


NITROGEN I  N  SULFUR I  N  ASH I  N  EMISSION FACTOR I  N  CONF LEVEL I  N  SPEC DATA I  N    DATE: CATEGORY 77001  POLLUTANT 77001


          *** CMSEFIN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-69

061280    000000010010002ICA067Y0808090808OY080809080809                    0
          *** CMSEFIN 011 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 2 TRANS

061280    00000001001000051CA06711101          0S                    PARTICULATES
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS
```

Figure AST3-4 - continued. Sample Output

(Page 8 of 12)

BEST DOCUMENT AVAILABLE

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                                  EMISSION FACTOR INSERTION PROGRAM                                        PAGE  13


NITROGEN I  N  SULFUR I  N  ASH I  N  EMISSION FACTOR I  N  CONF LEVEL I  N  SPEC DATA I  N    DATE: CATEGORY 77001  POLLUTANT 77001


310015    0087686666100051SD011431010033322749SLAS-JJJ5555          HC
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS

310015    0087686666100051SD01143102000120144B5LA                   NONMETH HC
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS

310015    0087686666100051SD011435020004200749SLAS-JJJ5555          FORMALYHYDE
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS

310015    0087686666100051SD0114410100000000000LAS                  TOTAL OXIDANTS
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS

310015    0087686666100051SD0114420100000000230LA                   OXONE
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS


PROGRAM NAME: CMSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980



NUMBER OF INPUT TRANSACTIONS:                             430
NUMBER OF EMISSION FACTOR RECORDS READ:                   682
NUMBER OF STATE AND LOCAL INSERTIONS MADE:                150
NUMBER OF FEDERAL INSERITONS MADE:                         17
NUMBER OF OUTPUT TRANSACTIONS:                            430
```

Figure AST3-4 - continued. Sample Output (Page 9 of 12)

```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                    PAGE      1

PROGRAM NAME: CFMMSTR (EC0070)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

   CONTROL DATE IS 80   ,  ERROR OPTION IS FLAG*  ,  LIST OPTION IS NOLIST


310015    00135000000000071SG01122306NITRATES       U000123 22403SULFATES       A000123
                                 *** CFMMSTR 016 ERROR - ATTEMPT TO ADD MORE THAN MAX NUMBER OF DESCRIPTION POLLUTANTS
                                 *** CFMMSTR 016 ERROR - ATTEMPT TO ADD MORE THAN MAX NUMBER OF DESCRIPTION POLLUTANTS

310015    0013510010100051SD01144101000000000000LAS                 TOTAL OXIDANTS
                                 *** CFMMSTR 013 ERROR - ATTEMPT TO ADD MORE THAN MAXIMUM NUMBER OF CATEGORY POLLUTANTS

310015    0013510010109051SD0114420100000000230LA                   OZONE
                                 *** CFMMSTR 013 ERROR - ATTEMPT TO ADD MORE THAN MAXIMUM NUMBER OF CATEGORY POLLUTANTS

310015    001351001010000000011SDCAT 100 DISAG 10        790012359120001312            Y080809080809080809080809247520013
                                 *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDCAT 100 DISAG 10        790012359120001312            Y080809080809080809080809247520013
                                 *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDCAT 100 DISAG 10        790012359120001312            Y080809080809080809080809247520013
                                 *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDCAT 100 DISAG 10        790012359120001312            Y080809080809080809080809247520013
                                 *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDCAT 100 DISAG 10        790012359120001312            Y080809080809080809080809247520013
                                 *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDCAT 100 DISAG 10        790012359120001312            Y080809080809080809080809247520013
                                 *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID
```

Figure AST3-4 - continued. Sample Output (Page 10 of 12)

```
                  EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                           PAGE     2
310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     00135100101000000011SDCAT 100 DISAG 10         790012359120001312              Y080809080809080809080809247520013
                            *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015     003670000000071SG01111114WINDBLN PART   U000123 21101TOTAL DUSTFALL A000123
                            *** CFMMSTR 016 ERROR - ATTEMPT TO ADD MORE THAN MAX NUMBER OF DESCRIPTION POLLUTANTS
                            *** CFMMSTR 016 ERROR - ATTEMPT TO ADD MORE THAN MAX NUMBER OF DESCRIPTION POLLUTANTS

310015     0036723401100051SD01144101000000000000LAS                  TOTAL OXIDANTS
                            *** CFMMSTR 013 ERROR - ATTEMPT TO ADD MORE THAN MAXIMUM NUMBER OF CATEGORY POLLUTANTS

310015     0036723401100051SD0114420100000000230LA                    OXONE
```

Figure AST3-4 - continued. Sample Output (Page 11 of 12)

BEST DOCUMENT AVAILABLE

82

```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                         PAGE     8
NUMBER OF INPUT TRANSACTIONS READ:                            430
NUMBER OF DISASTERS DETECTED:                                   0
NUMBER OF ABORTS DETECTED:                                      0
NUMBER OF ERRORS DETECTED:                                     78
NUMBER OF CONDITIONALS DETECTED:                                0
NUMBER OF WARNINGS DETECTED:                                    0
NUMBER OF TRANSACTIONS REJECTED:                               11
NUMBER OF AREA SOURCE FILE RECORDS READ IN:                   349
NUMBER OF AREA SOURCE FILE RECORDS WRITTEN OUT:               417
```

Figure AST3-4 - continued. Sample Output

(Page 12 of 12)

EIS/AS Test 4

Produce a Formatted Dump of the Master File

In this test run, a formatted dump of the EIS/AS master file output from Test 3 is printed using the cataloged procedure ECRPM30 which executes CRPDUMP (EC0140), the master file formatted dump program.

CRPDUMP (EC0140) produces a formatted dump of the EIS/AS master file; i.e., a listing with identifying headings of all the fields in each master file record, as the record appears in the file. This formatted dump is useful for verifying information contained in a master file and isolating invalid data.

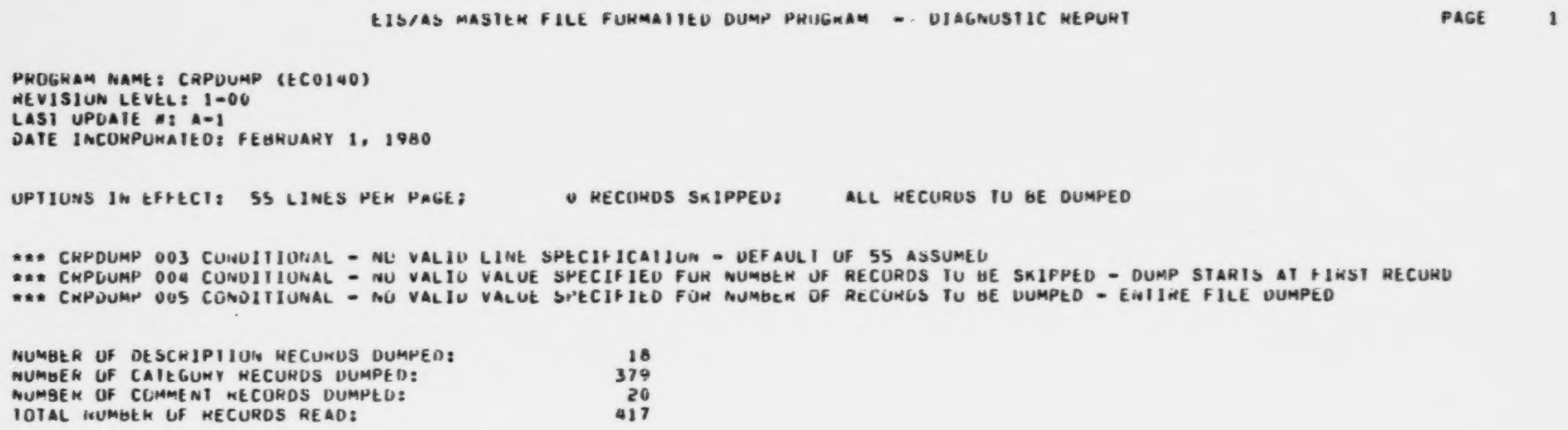
The options in this program are used to specify the number of lines per printed page and the portion of the master file to be dumped. The maximum number of lines per printed page can be specified by the user in card columns 1 and 2 of the option card. This option can reduce the amount of paper used by those who have standard 11 x 14 inch output forms and the ability to print eight lines per inch. The maximum number of lines to be printed per page should be a number between 20 and 80. There are two other user-specified options: the number of records to be skipped before printing the first record to be dumped and the total number of records to be dumped. These two options make it possible for users to inspect specific portions of the master file without having to list the entire file. Columns 3 through 8 are used for coding the number of records to be skipped, and columns 9 through 14 are used for the total number of records to be dumped. If the number of records to be skipped is specified, but the number of records to be dumped is not, all records will be dumped except those that are specified to be skipped. One or more options as well as the entire option card can be omitted. The default options are 55 lines per page, no records skipped, and the entire file dumped.

The run stream for this test run contains the JCL needed for dumping the contents of the master file. This run stream is shown in Figure AST4-1.

The cataloged procedure executed by this run stream is ECRPM30. A substitutable parameter specifies the input master file as ECMSTR2 (created in Test 3). The user must supply the DD (data definition) information for the option card file. The option card is not present in this run stream; therefore, the default options are in effect. Refer to Figure AST4-2 for the sample output produced by this run stream.

```
//ASTEST04 JOB    (ACCOUNTING INFO)
//*
//*   PRODUCE A FORMATTED DUMP OF THE FIS/AS MASTER FILE
//*
//TEST04A EXEC ECRPM30,
//       MSTRFIL=ECMSTR2
//*
//*   GENERATE A DUMP OF THE MASTER FILE CREATED IN TEST 3
//*
```

Figure AST4-1. Run Stream



```
                    EIS/AS MASTER FILE FORMATTED DUMP PROGRAM  -- DIAGNOSTIC REPORT                    PAGE     1

PROGRAM NAME: CRPDUMP (EC0140)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT:  55 LINES PER PAGE;        0 RECORDS SKIPPED;     ALL RECORDS TO BE DUMPED


*** CRPDUMP 003 CONDITIONAL - NO VALID LINE SPECIFICATION - DEFAULT OF 55 ASSUMED
*** CRPDUMP 004 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE SKIPPED - DUMP STARTS AT FIRST RECORD
*** CRPDUMP 005 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE DUMPED - ENTIRE FILE DUMPED


NUMBER OF DESCRIPTION RECORDS DUMPED:                18
NUMBER OF CATEGORY RECORDS DUMPED:                  379
NUMBER OF COMMENT RECORDS DUMPED:                    20
TOTAL NUMBER OF RECORDS READ:                       417
```

Figure AST4-2. Sample Output (Page 1 of 2)

```
                                          EIS/AS MASTER FILE FORMATTED DUMP                                           PAGE      1

     STATE=06   COUNTY=1280   GEOGR/SUBALLOC/#=00000   CATEGRY/#=000   DISAGGR/#=00   RECORD/TYPE/(KEY)=0   LINE/#=000   BATCH=
AQCR=067 REC/TYPE=CG YR=   DY=    AIR/BSIN=    SMSA=     AREA=                      MJ/ACT=                  PLT/ID=      BSE/YR=  PRJD/YR=
PURL/POP/%=   POPUL=            AQCR/NM=                          SUBAL/TECHNQ/CD=   SUBAL/TECHNQ/DESC=                    DFEND/AREA/CD=
SULFUR/CONTENTS: (ANTHRACT/COAL=  ,BITUMNS/COAL=  ,DISTILLT/OIL=  ,RESID/OIL=  )  ASH/CONTENTS: (ANTHRACT/COAL=   ,BITUMNS/COAL=    )
#/UTM/COORDS=0     1ST: (ZONE=  ,HORIZ=     ,VERT=      )   2ND: (ZONE=  ,HORIZ=     ,VERT=      )   3RD: (ZONE=  ,HORIZ=     ,VERT=      )
                   4TH: (ZONE=  ,HORIZ=     ,VERT=      )   5TH: (ZONE=  ,HORIZ=     ,VERT=      )   6TH: (ZONE=  ,HORIZ=     ,VERT=      )
SOURCE/TYPE=   LENGTH/AREA=          LENGTH/AREA/UNITS/CODE=      STP/ESTIMATES:  (TSP=      , SO2=     , NOX=     , HC=      , CO=     )
POP/CODE=   VEH: (GAS/LGT=           GAS/HEV=         DIESL/HEV=        )  MVMILES/RDS: (LIM/ACCS=         RUR=         SUB=         URB=      )
NEDS/A1/FLG= A EIS/FLGS: (CARD/1= ,CARD/2= ,CARD/3= ,CARD/4= ,CARD/5= ,CARD/6= )  #/POLL=05
** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7   ** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7  **
**  42602                            U                     A         **  43101   HYDROCARBONS           U                     A           **
**  11101   PARTICULATES             U                     A         **  42101   CARBON MONOXIDE        U                     A           **
**  42401   SULFUR DIOXIDE           U                     A         **                                                                   **

-----------------------------------------------------------------------------------------------------------------------------------------

     STATE=06   COUNTY=1280   GEOGR/SUBALLOC/#=00000   CATEGRY/#=000   DISAGGR/#=00   RECORD/TYPE/(KEY)=2   LINE/#=000   BATCH=
AQCR=067  REC/TYPE= N  COMMENT=AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OF CATEGORIES
NEDS/A6/FLG=A        EIS/FLG/1=         EIS/FLG/2=

-----------------------------------------------------------------------------------------------------------------------------------------

     STATE=06   COUNTY=1280   GEOGR/SUBALLOC/#=00000   CATEGRY/#=001   DISAGGR/#=00   RECORD/TYPE/(KEY)=1   LINE/#=000   BATCH=
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=RESIDENT ANTHRACITE COAL    YR/OF/INFO=79  PRCSS/RATE=000040123  CATEGRY/ADJ=            UNITS/CD=
UNITS/CD/DESC=                 UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=08,MAR=09,APR=06,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=      THRUPT/RATIO=        MAX/HRLY/THRUPT=                 DATA/CONFIDENCE/RATNG=0
NITRG/%=       SULF/%=     ASH/%=      HEAT/CONT=        UNIFRM/HRLY/THRUPT=     HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                  INFO/SOURCE/CODE=S
INFO/SRCE/MARK=                               EIS/FLG/1=A  EIS/FLG/2=A  EIS/FLG/3=   EIS/FLG/4=A  NEDS/FLG=A  NEDS/A7/FLG=A  #/POLL=07
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS     POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101                  0                     S                                PARTICULATES        A       0000000       0
42101                  0                     S                                CARBON MONOXIDE     A       0000000       0
42401                  0                     S                                SULFUR DIOXIDE      A       0000000       0
42602                  0                     S                                NITROGEN OXIDES     A       0000000       0
43101                  0                     S                                HYDROCARBONS        A       0000000       0
42269                  0                     L                                TOTAL SULFUR        A       0000000       0
43201                  0                     L                                METHANE             A       0000000       0

-----------------------------------------------------------------------------------------------------------------------------------------

     STATE=06   COUNTY=1280   GEOGR/SUBALLOC/#=00000   CATEGRY/#=002   DISAGGR/#=00   RECORD/TYPE/(KEY)=1   LINE/#=000   BATCH=
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=RESIDENT BITUMINOUS COAL    YR/OF/INFO=79  PRCSS/RATE=000020010  CATEGRY/ADJ=            UNITS/CD=
UNITS/CD/DESC=                 UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=08,MAR=09,APR=08,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=      THRUPT/RATIO=        MAX/HRLY/THRUPT=                 DATA/CONFIDENCE/RATNG=0
NITRG/%= 100  SULF/%=      ASH/%=040  HEAT/CONT=        UNIFRM/HRLY/THRUPT=     HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,16=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                  INFO/SOURCE/CODE=S
INFO/SRCE/MARK=                               EIS/FLG/1=A  EIS/FLG/2=A  EIS/FLG/3=   EIS/FLG/4=A  NEDS/FLG=A  NEDS/A7/FLG=A  #/POLL=06
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS     POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101   0000002000     0                     S                                PARTICULATES        A       0000080       0
42101   0000000575     0                     S                                CARBON MONOXIDE     A       0000006       0
42401   0000006200     0                     S                                SULFUR DIOXIDE      A       0000000       0
42602   0000018000     0                     S                                NITROGEN OXIDES     A       0000019       0
43101   0000133000     0                     S                                HYDROCARBONS        A       0001331       0
43201   0000066500     0                     L                                METHANE             A       0000665       0
```

Figure AST4-2 - continued. Sample Output (Page 2 of 2)

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EIS/AS Test 5

Update the Master File Using EIS/AS Transactions

In this test run, the master file output from Test 3 is updated with EIS/AS transactions using three cataloged procedures. The first procedure is ECEDT10 which executes CEDMSTR (EC0040), the master file transaction edit program. The second procedure is ECMST10 which executes CSRINTR (EC0050), the master file internal transaction sort program; and CMSEFIN (EC0060), the master file internal transaction emission factor insertion program. The third procedure is ECFMM10 which executes CSRINTR (EC0050) and CFMMSTR (EC0070), the master file maintenance program.

This test is similiar to Test 3 in that both tests execute the same programs. However, unlike Test 3 which used one cataloged procedure to execute all the programs, this test run uses three procedures. By using separate procedures, the user can edit several different sets of input transactions and then perform a single emission factor insertion and file maintenance on all the edited transactions. This will result in operating cost savings. Refer to Test 3 for a description of CEDMSTR (EC0040) and to Test 2 for a description of CSRINTR (EC0050), CMSEFIN (EC0060) and CFMMSTR (EC0070).

The run stream for this test run contains the JCL needed to update an EIS/AS master file. This run stream is shown in Figure AST5-1. The sample output produced by this run stream is shown in Figure AST5-2.

First, the run stream executes the cataloged procedure ECEDT10. Through the use of substitutable parameters, the output internal transaction file is named ECINTR1. For the EDIT step, the user must supply the DD (data definition) information for the option card file and the input EIS/AS master file transaction file. The options specified in this step are 80 and FLAGW.

Next, the cataloged procedure ECMST10 is executed. Substitutable parameters are used to specify the input emission factor file as ECEMFL1 (created in Test 1), the input internal transaction file as ECINTR1 (created in the previous step), and the output internal transaction file as ECINTR2.

The user must supply the DD information for the option card file in the INSERT step. The options specified for this step are: FLAGW, NIT I, SUL I, ASH I, EMISSION I, CONF I, SPEC I, CDAT 75000, and PDAT 75000.

The last procedure to be executed is ECFMM10. By using substitutable parameters, the input master file is ECMSTR2 (created in Test 3), the input internal transaction file is ECINTR2 (created in the previous step), and the output master file is named ECMSTR3. The DD information for the option card file in the UDPATE step must be specified by the user. In this step the options are 80, FLAGW, and LIST.

```
//ASTESTO5 JOB    (ACCOUNTING INFO)
//*
//*   UPDATE THE ETS/AS MASTER FILE USING ETS/AS TRANSACTIONS
//*
//TESTO5A EXEC ECEDT10,
//      INTRTRN=ECINTR1
//*
//*   EDIT THE ETS/AS TRANSACTIONS
//*
//EDIT.INPUT DD *
0612800670061100835                                                         SD1D
14804007400000                                                              CG1D
4213801980000000500                                                         CA1D
14784000740000000100N05050585               125500023    4444440234120100034CA2C
14784000740000000100001THIS IS COMMENT 1                                     H1A
14784000740000000100N05050585               125500023    4444440234120100034CA2A
3100150110013510010                                                         CR1D
061280067                                                                    N0D

14784000740000800040134213SMITH COUNTY        INDUSTRY            1120788223CG1C
147840007400000011234512345678885120512345789654122235563226123455554       CG0C
14784000740000011101TSP-1         U000123 42101CCI            A00023        CG7C
14784000740000000100N05050585               125500023    4444440234120100034CA2A
14784000740000000100N2020202020                                             CA3C
14786007400000800040134213GEORGE COUNTY       INDUSTRY            1120788223CG1C
1478600740000000125013700120345900119                                       CG5C
14786007400000 000123400014500201000419000580100001480001578                CG6C
14786007400000011101TSP-1         U000123 42101CCI            A00023        CG7A
147860074000000003000002HIS IS COMMENT 1                                     H1A
3100150110013510010                                 125      23             SD1C
310015011001351001011101     26100   1234                                   SD5C
3100150110036723401                                1597      10             SD1C
310015011003672340121101    351111   XXJ-12                                 SD5C
310015011003672340143101   1351001   XXJ-12        100                      SD5C
3100150110087686601                                   5     100             SD1C
3100150110087686666                                2000     312             SD1C
310015011008768666611101     26100   1234                                   SD5C
310015011008768666643101   1351001   XXJ-12        100                      SD5C
42068019800000800040134213GEORGE COUNTY       INDUSTRY            1120788223CG1C
4206801980000000020124AGCR IS 198COUNTY       INDUSTRY            1120788223CG2C
420680198000015CAASF                 1230102030812514504                    CG3A
420680198000015CAASF                 1230102030812514504                    CG3C
4206801980000011114WINDBLN PART   U000451 22403SULFATES        A000241      CG7A
42068019800000000100N05050585               125500023    4555540234120100034CA2C
42068019800000000100N05050585               125500023    4444440234120100034CA2C
42068019800000000100N2020202020                                             CA3C
0612800670000073079                                                         CG1A
//EDIT.OPTIONS DD *
80 FLAGW
//TESTO5B EXEC ECMST10,
//      EMFCFIL=ECEMFL1,
//      OLDINTR=ECINTR1,
//      NEWINTR=ECINTR2
//*
//*   INSERT EMISSION FACTORS IN THE INTERNAL TRANSACTIONS
//*   CREATED IN STEP A
//*
//INSERT.OPTIONS DD *
FLAGW   NIT I  SUL I  ASH I  EMISSION I  CONF I  SPEC I  CDAT 75000 PDAT 75000
//TESTO5C EXEC ECFMM10,
//      OLDMSTR=ECMSTR2,
```

(Page 1 of 2)

Figure AST5-1. Run Stream

```
//         NEWMSTR=FCMSTR3,
//         INTRTRN=FCINTR2
//*
//*   UPDATE THE MASTER FILE CREATED IN TEST 3 WITH THE
//*   INTERNAL TRANSACTIONS CREATED IN STEP B OF THIS
//*   TEST
//*
//UPDATE.OPTIONS DD *
NO FLAGW LIST
```

(Page 2 of 2)

Figure AST5-1 - continued. Run Stream

```
                                 EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                          PAGE       1

PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT: CONTROL YEAR 80    FLAGW     NOLIST
                                               (DEFAULT)

         *** CEDMSTR 004 CONDITIONAL - BLANK OR INVALID LIST OPTION, ASSUMING NOLIST

14784000740000000100N05050585                    125500023     4444440234120100З4CA2C                           REF:        4
         *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED

147840074000000100001THIS IS COMMENT 1                                           R1A                            REF:        5
                  B E
         *** CEDMSTR 021 ERROR - COLUMN 20 - LINE NUMBER INVALID, CARD REJECTED

14784000740000000100N05050585                    125500023     44444402341201003 4CA2A                          REF:        6
         *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED

                                                                                                                REF:        9
BEB  EB E                                                                        BBB
         *** CEDMSTR 005 ERROR - COLUMN 80 - INVALID ACTION CODE, CARD REJECTED
         *** CEDMSTR 009 ERROR - COLUMN 01 - INVALID STATE CODE, CARD REJECTED
         *** CEDMSTR 010 ERROR - COLUMN 03 - INVALID COUNTY CODE, CARD REJECTED
         *** CEDMSTR 011 ERROR - COLUMN 07 - INVALID AQCR, CARD REJECTED
         *** CEDMSTR 006 ERROR - COLUMN 78 - INVALID, CARD REJECTED
         *** CEDMSTR 008 ERROR - COLUMN 79 - INVALID CARD NUMBER, CARD REJECTED

147840074000000011234512345676885120512345789654122235563226123455554            CG4C                           REF:       11
             BE    B   EBE    B   EBE    B   EBE    B   EB
         *** CEDMSTR 064 CONDITIONAL - COLUMN 15 - UTM ZONE 3 OUT OF RANGE
         *** CEDMSTR 066 CONDITIONAL - COLUMN 21 - UTM VERTICAL 3 OUT OF RANGE
         *** CEDMSTR 070 CONDITIONAL - COLUMN 26 - UTM ZONE 4 OUT OF RANGE
         *** CEDMSTR 074 CONDITIONAL - COLUMN 32 - UTM VERTICAL 4 OUT OF RANGE
         *** CEDMSTR 076 CONDITIONAL - COLUMN 37 - UTM ZONE 5 OUT OF RANGE
         *** CEDMSTR 080 CONDITIONAL - COLUMN 43 - UTM VERTICAL 5 OUT OF RANGE
         *** CEDMSTR 082 CONDITIONAL - COLUMN 46 - UTM ZONE 6 OUT OF RANGE
         *** CEDMSTR 086 CONDITIONAL - COLUMN 54 - UTM VERTICAL 6 OUT OF RANGE
         *** CEDMSTR 087 ERROR - COLUMN 59 - SOURCE TYPE INVALID, REPLACING SPACE

42068019800000015CAASE                 12301020308125145O4                       CG3A                           REF:       31
                                                         BE
         *** CEDMSTR 052 CONDITIONAL - COLUMN 54 - UTM ZONE 1 OUT OF RANGE

42068019800000015CAASE                 123010203081251450 4                      CG3C                           REF:       32
                                                         BE
         *** CEDMSTR 052 CONDITIONAL - COLUMN 54 - UTM ZONE 1 OUT OF RANGE
```

Figure AST5-2. Sample Output

(Page 1 of 8)

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```
                              EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE      2
NUMBER OF INPUT TRANSACTIONS:           37
NUMBER OF VALID TRANSACTIONS:           33
NUMBER OF REJECTED TRANSACTIONS:         4
NUMBER OF TRANSACTIONS WRITTEN:         33
NUMBER OF WARNING MESSAGES:              0
NUMBER OF CONDITIONAL MESSAGES:         11
NUMBER OF ERROR MESSAGES:               10
NUMBER OF ABORT MESSAGES:                0
NUMBER OF DISASTER MESSAGES:             0

PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
                EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                       PAGE     1


PROGRAM NAME: CSRINTR (EC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                        33
NUMBER OF TRANSACTIONS WRITTEN:                           34
```

Figure AST5-2 - continued. Sample Output
(Page 2 of 8)

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```
                                        EMISSION FACTOR INSERTION PROGRAM                                          PAGE   1


PROGRAM NAME: CMSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980



OPTIONS IN EFFECT:  FLAGW

          FIELDS SELECTED FOR INSERTIONS:  NIT  SUL  ASH  EMISSION  CONF  SPEC  CDAT 75000 PDAT 75000

          FIELDS TO BE OVERRIDDEN:  NONE



FLAGW   NIT I  SUL I  ASH I  EMISSION I  CONF I  SPEC I  CDAT 75000 PDAT 75000



          *** CMSEFIN 022 ERROR - NO VALID OVERRIDES SPECIFIED - NO OVERRIDES ASSUMED



NITROGEN I  N  SULFUR I  N  ASH I  N  EMISSION FACTOR I  N  CONF LEVEL I  N  SPEC DATA I  N    DATE: CATEGORY 75000  POLLUTANT 75000



          *** CMSEFIN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64

147840    0000000100100021CA074N05050585000000000000000001255000230000044440234120100 34
          *** CMSEFIN 041 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 2 TRANS

310015    0013510010100052SD011111010000026100    1234
          *** CMSEFIN 018 ERROR - UNFLAGGED INPUT CATEGORY-5 TRANSACTION
```

Figure AST5-2 - continued. Sample Output
(Page 3 of 8)

```
                                     EMISSION FACTOR INSERTION PROGRAM                                        PAGE   3


NITROGEN I  N  SULFUR I  N  ASH I  N  EMISSION FACTOR I  N  CONF LEVEL I  N  SPEC DATA I  N    DATE: CATEGORY 75000  POLLUTANT 75000


NUMBER OF INPUT TRANSACTIONS:                       34
NUMBER OF EMISSION FACTOR RECORDS READ:            682
NUMBER OF STATE AND LOCAL INSERTIONS MADE:           0
NUMBER OF FEDERAL INSERTIONS MADE:                   3
NUMBER OF OUTPUT TRANSACTIONS:                      34




-------------------------------------------------------------------------------------------------------------




                 EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                PAGE    1


PROGRAM NAME: CSRINTR (LC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                            34
NUMBER OF TRANSACTIONS WRITTEN:                               35
```

Figure AST5-2 - continued. Sample Output (Page 4 of 8)

```
                       EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                         PAGE      1

PROGRAM NAME: CFMMSTR (EC0070)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTION CARD

   CONTROL DATE IS 80    ,  ERROR OPTION IS FLAGN  ,  LIST OPTION IS LIST



147840    0000000100100021CA074N05050585000000000000000012550002300000444444023412010034
                                 *** CFMMSTR 006 ERROR - ADD TRANSACTION, RECORD ALREADY ON MASTER FILE, CARD REJECTED

147860    0000000000000071CG0741110115P-1          0000123 42101C01            A00023
                                 *** CFMMSTR 015 ERROR - DESCRIPTION POLLUTANT ID ALREADY ON FILE, POLLUTANT REJECTED
                                 *** CFMMSTR 015 ERROR - DESCRIPTION POLLUTANT ID ALREADY ON FILE, POLLUTANT REJECTED

310015    0013510010200010 R011
                                 *** CFMMSTR 007 ERROR - TRANSACTION NOT ADD, BUT NO MASTER ON FILE, CARD REJECTED

420680    0000000000000031CG19815CAASE               1230102030812514504
                                 *** CFMMSTR 006 ERROR - ADD TRANSACTION, RECORD ALREADY ON MASTER FILE, CARD REJECTED

420680    0000000100100022CA196N05050585                12550002300000444444023412010034
                                 *** CFMMSTR 007 ERROR - TRANSACTION NOT ADD, BUT NO MASTER ON FILE, CARD REJECTED

420680    0000000100100022CA196N05050585                12550002300000455554023412010034
                                 *** CFMMSTR 007 ERROR - TRANSACTION NOT ADD, BUT NO MASTER ON FILE, CARD REJECTED

420680    0000000100100032CA196N2020202020
                                 *** CFMMSTR 007 ERROR - TRANSACTION NOT ADD, BUT NO MASTER ON FILE, CARD REJECTED



- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


                       EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                         PAGE      2
    NUMBER OF INPUT TRANSACTIONS READ:                              34
    NUMBER OF DISASTERS DETECTED:                                    0
    NUMBER OF ABORTS DETECTED:                                       0
    NUMBER OF ERRORS DETECTED:                                       8
    NUMBER OF CONDITIONALS DETECTED:                                 0
    NUMBER OF WARNINGS DETECTED:                                     0
    NUMBER OF TRANSACTIONS REJECTED:                                 7
    NUMBER OF AREA SOURCE FILE RECORDS READ IN:                    417
    NUMBER OF AREA SOURCE FILE RECORDS WRITTEN OUT:                420
```

Figure AST5-2 - continued. Sample Output

(Page 5 of 8)

BEST DOCUMENT AVAILABLE

```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  INTERNAL TRANSACTION LISTING                    PAGE      1

000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
061280     0000000000200000 N067
061280     0061100635100010SD067
147840     0000000000000012CG0748000040134213SMITH COUNTY         INDUSTRY             1120788223
147840     0000000000000042CG074011234512345678885120512345789654122235556322 123455554
147840     0000000000000072CG07411101TSP-1              0000123 42101C01           A00023
147840     0000000100100021CA074N0505058500000000000000001255002300000444444023412010034
147840     0000000100100032CA074N2020202020
147860     0000000000000012CG0746000040134213GEORGE COUNTY        INDUSTRY             1120788223
147860     0000000000000052CG07400125013700120345900119
147860     0000000000000062CG074 000123400014500201000419000560100001480001578
147860     0000000000000071CG07411101TSP-1              0000123 42101C01           A00023
147860     0000000300200211 N074HIS IS COMMENT 1
148040     0000000000000010CG074
310015     0013510010100012SD011                                 0000001250000023
310015     0013510010100052SD0111111010000026100   1234
310015     0013510010200010 N011
310015     0036723401100012SD011                                 0000015970000010
310015     0036723401100052SD011211010000351111    XXJ-12
310015     0036723401100052SD011431010001351001    XXJ-12    0000100
310015     0087686601100012SD011                                 0000000050000100
310015     0087686666100012SD011                                 0000020000000312
310015     0087686666100052SD0111111010000026100   1234
310015     0087686666100052SD011431010001351001    XXJ-12    0000100
420680     0000000000000012CG1986000040134213GEORGE COUNTY        INDUSTRY             1120788223
420680     0000000000000022CG198000201244WCR IS 198COUNTY         INDUSTRY             1120788223
420680     0000000000000031CG19815CAASE               1230102030812514504
420680     0000000000000032CG19815CAASE               1230102030812514504
420680     0000000000000071CG198111144INDHLN PART   0000451 22403SULFATES        A000241
420680     0000000100100022CA198N05050565             1255000230000044444402341201003 4
420680     0000000100100022CA198N05050585             1255000230000045555402341201003 4
420680     0000000100100032CA198N2020202020
421380     0000000500100010CA198
461280     6000000000000011CG06773079
```

Figure AST5-2 - continued. Sample Output

(Page 6 of 8)

```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  OLD MASTER FILE LISTING                     PAGE      1
061280    000000000000000565067CG
061280    000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
061280    000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                   Y080809080809080809080809
061280    000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                   Y080809080809080809080809
061280    000000030010000734067CARESIDENT DISTILLATE OIL  79000009750                   Y080809080809080809080809
061280    000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                   Y080809080809080809080809
061280    000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                   Y080809080809080809080809
061280    000000060010000734067CARESIDENTIAL WOOD         79000000050                   Y080809080809080809080809
061280    000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                   Y080809080809080809080809
061280    000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                   Y080809080809080809080809
061280    000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                   Y080809080809080809080809
061280    000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                   Y080809080809080809080809
061280    000000110010000669067CACOMM-INST NATURAL GAS    79000008750                   Y080809080809080809080809
061280    000000120010000734067CACOMM-INST WOOD           79000000005                   Y080809080809080809080809
061280    000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000098750                   Y080809080809080809080809
061280    000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                   Y080809080809080809080809
061280    000000150010000734067CAINDUSTRIAL COKE          79000009850                   Y080809080809080809080809
061280    000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                   Y080809080809080809080809
061280    000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                   Y080809080809080809080809
061280    000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                   Y080809080809080809080809
061280    000000190010000669067CAINDUSTRIAL WOOD          79000000025                   Y080809080809080809080809
061280    000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                   Y080809080809080809080809
061280    000009990010000799   CA
061280    000010000000000453067SG79
061280    000010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280    000010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280    000010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280    000010019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280    000019990010000474   CA
061280    005000000000000453067SG
061280    005000010110000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    005000012210000344067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280    005000017010000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    005009990010000279   CA
061280    006110000000000453067SG79
061280    006110083510000409067SDCOMM-INST BITUMINOUS COAL79000034750                   Y080809080809080809080809
061280    006119990010000279   CA
061280    999990000000000453067SG79
061280    999990019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280    999999990010000279   CA
062238    000000000000000453067CG79
062238    000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
062238    000000230010000669067CACOMM-INST ON-SITE INCINER79000002350                   Y080809080809080809080809
062238    000000470010000604067CACIVIL AIRCRAFT LTO"S     79000005005                   Y080809080809080809080809
062238    000000600010000669067CAFOREST WILD FIRES        79         0000900            Y080809080809080809080809
062238    000009990010000669   CA
147640    000000000000000565074CG75
```

Figure AST5-2 - continued. Sample Output (Page 7 of 8)

```
                      FIB/AS MASTER FILE MAINTENANCE PROGRAM  -  NEW MASTER FILE LISTING                          PAGE      1
061280    000000000000000565067CG
061280    000000000020000136067 N*
061280    000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                    Y080809080809080809080809
061280    000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                    Y080809080809080809080809
061280    000000030010000734067CARESIDENT DISTILLATE OIL  79000009750                    Y080809080809080809080809
061280    000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                    Y080809080809080809080809
061280    000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                    Y080809080809080809080809
061280    000000060010000734067CARESIDENTIAL WOOD         79000000050                    Y080809080809080809080809
061280    000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                    Y080809080809080809080809
061280    000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                    Y080809080809080809080809
061280    000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                    Y080809080809080809080809
061280    000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                    Y080809080809080809080809
061280    000000110010000669067CACOMM-INST NATURAL GAS    79000008750                    Y080809080809080809080809
061280    000000120010000734067CACOMM-INST WOOD           79000000005                    Y080809080809080809080809
061280    000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000098750                    Y080809080809080809080809
061280    000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                    Y080809080809080809080809
061280    000000150010000734067CAINDUSTRIAL COKE          79000009850                    Y080809080809080809080809
061280    000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                    Y080809080809080809080809
061280    000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                    Y080809080809080809080809
061280    000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                    Y080809080809080809080809
061280    000000190010000669067CAINDUSTRIAL WOOD          79000000025                    Y080809080809080809080809
061280    000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                    Y080809080809080809080809
061280    000049900010000794   CA
061280    000010000000000453067SG79
061280    000010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    000010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    000010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    000010019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    000019990010000474   CA
061280    005000000000000453067SG
061280    005000101110000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    005000012210000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    005000017010000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    005099990010000344   CA
061280    006110000000000453067SG79
061280    006110083510000409067SDCOMM-INST BITUMINOUS COAL79*       *                    Y080809080809080809080809
061280    006119990010000344   CA
061280    999900000000000453067SG79
061280    999900019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    999999990010000344   CA
062238    000000000000000453067CG79
062238    000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
062238    000000230010000669067CACOMM-INST ON-SITE INCINER79000002350                    Y080809080809080809080809
062238    000000470010000604067CACIVIL AIRCRAFT LTOS      79000005005                    Y080809080809080809080809
062238    000000600010000669067CAFOREST WILD FIRES        79         0000900             Y080809080809080809080809
062238    000099990010000669   CA
147840    000000000000000565074CG800040134213SMITH COUNTY        INDUSTRY           1120788223
```

Figure AST5-2 - continued. Sample Output

(Page 8 of 8)

EIS/AS Test 6

Submit Annual Report in NEDS Format

In this test run, data from the EIS/AS master file can be submitted to NEDS by generating NEDS area source transactions. The cataloged procedure ECRPM10 is used to execute CRPASNA (EC0120), the annual report program.

CRPASNA (EC0120) generates the annual report from the EIS/AS master file. This report consists of transactions which contain the information in the master file that has been added, changed, or deleted since the last execution of this program. These transactions can be generated in either the NEDS area source transaction format or the EIS/AS internal transaction format.

The option card for CRPASNA (EC0120) provides the user with three options: a transaction option, a warning option, and a list option. The transaction option allows the user to choose which type of transactions are to be generated (NEDS area source or EIS/AS internal transactions). By specifying NEDS in columns 1 through 4 of the option card, the program will generate NEDS area source transactions. In order to generate EIS/AS internal transactions, the user must specify AREA in columns 1 through 4 of the option card. If this field is left blank or if the option is specified incorrectly, program execution will be terminated.

The warning option allows the user to suppress the printing of warning messages. In order to suppress warning messages, the user must code NOFLAGW in columns 6 through 12 of the option card. If this field is left blank or if the option is specified incorrectly, the program will assume a default of NOFLAGW. If the user does not want to suppress warning messages, he must code FLAGW in columns 6 through 10 and leave columns 11 and 12 blank.

The list option allows the user to obtain listings of the input master file, the output master file, and the generated transactions. These listings are useful for confirming that the appropriate data has been submitted to NEDS and for diagnosing potential errors. To obtain listings, the user must code LIST in columns 14 through 17 of the option card and leave columns 18 and 19 blank. To suppress the listings, the user must code NOLIST in columns 14 through 19 of the option card. If this field is left blank or if the option is specified incorrectly, the program will assume a default of NOLIST.

The output EIS/AS master file differs from the input master file in that the status flags have been set to reflect the new submission status of all the records. The output master file might contain fewer records than the input master file since some records may have been deleted.

The output transaction file, whether it be NEDS or EIS/AS internal transactions, contains only data which have been added, changed, or deleted since the last execution of CRPASNA (EP0120). Add transactions are generated when records have been added to the master file. Change transactions are generated when a data field in an existing record has been added, changed, or deleted. If a data field is to be deleted, the change transaction will contain an asterisk in the first position of the corresponding transaction field. Delete transactions are generated when an entire record has been flagged for deletion in the master file.

The run stream for this test run contains the JCL needed for converting data from the EIS/AS master file into NEDS area source transactions for submission to NEDS. This run stream is shown in Figure AST6-1.

The cataloged procedure executed by this run stream is ECRPM10. By using substitutable parameters, the input master file is specified as ECMSTR3 (created in Test 5), the output master file is named ECMSTR4, and the output NEDS transaction file is named ECNEDS1. The user must supply the DD (data definition) information for the option card file in the REPORT step. The options specified in this test run are NEDS, FLAGW, and LIST. Notice that when NEDS transactions are being generated the EIS/AS internal transaction file ECSASTR _must_ be a dummy file in the REPORT step. The sample output produced by this run stream is shown in Figure AST6-2.

```
//ASTEST06 JOB      (ACCOUNTING INFO)
//*
//*    SUBMIT ANNUAL REPORT TO NEDS USING NEDS TRANSACTIONS
//*
//TEST06A EXEC ECRPM10,
//        OLDMSTR=ECMSTR3,
//        NEWMSTR=ECMSTR4,
//        TRANFL1=ECNEDS1
//*
//*    GENERATE NEDS TRANSACTIONS FOR ANNUAL REPORT
//*
//REPORT.ECSASTR DD DUMMY
//REPORT.OPTIONS DD *
NEDS FLAGS   LIST
```

Figure AST6-1. Run Stream

```
                              EIS/AS ANNUAL REPORT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE    1

PROGRAM NAME: CRPASNA (EC0120)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT: NEDS, FLAGW  , LIST

INPUT EIS/AS MASTER FILE COUNT:             420
OUTPUT EIS/AS MASTER FILE COUNT:            371
RECORDS DELETED FROM MASTER FILE:            49
NEDS TRANSACTIONS GENERATED:                 88
   ADD TRANSACTIONS COUNT:                   88
   CHANGE TRANSACTIONS COUNT:                 0
   DELETE TRANSACTIONS COUNT:                 0
NUMBER OF ERROR MESSAGES:                     0
NUMBER OF WARNING MESSAGES:                   0
NUMBER OF CONDITIONAL MESSAGES:               0
NUMBER OF ABORT MESSAGES:                     0
NUMBER OF DISASTER MESSAGES:                  0
```

Figure AST6-2. Sample Output (Page 1 of 4)

```
                                             INPUT ETS/AS MASTER FILE                                                          PAGE       1

061280    00000000000000565067CG
061280    00000000002000136067 N*
061280    00000001001000734067CARESIDENT ANTHRACITE COAL 79000040123                    Y080809080809080809080809
061280    00000002001000669067CARESIDENT BITUMINOUS COAL 79000020010                    Y080809080809080809080809
061280    00000003001000734067CARESIDENT DISTILLATE OIL  79000009750                    Y080809080809080809080809
061280    00000004001000669067CARESIDENTIAL RESIDUAL OIL 79000008900                    Y080809080809080809080809
061280    00000005001000669067CARESIDENTIAL NATURAL GAS  79000023550                    Y080809080809080809080809
061280    00000006001000734067CARESIDENTIAL WOOD         79000000050                    Y080809080809080809080809
061280    00000007001000669067CACOMM-INST ANTHRACITE COAL79000023500                    Y080809080809080809080809
061280    00000008001000669067CACOMM-INST BITUMINOUS COAL79000034750                    Y080809080809080809080809
061280    00000009001000734067CACOMM-INST DISTILLATE OIL 79000042100                    Y080809080809080809080809
061280    00000010001000669067CACOMM-INST RESIDUAL OIL   79000000390                    Y080809080809080809080809
061280    00000011001000669067CACOMM-INST NATURAL GAS    79000008750                    Y080809080809080809080809
061280    00000012001000734067CACOMM-INST WOOD           79000000005                    Y080809080809080809080809
061280    00000013001000669067CAINDUSTRY ANTHRACITE COAL 79000098750                    Y080809080809080809080809
061280    00000014001000669067CAINDUSTRY BITUMINOUS COAL 79000123400                    Y080809080809080809080809
061280    00000015001000734067CAINDUSTRIAL COKE          79000009850                    Y080809080809080809080809
061280    00000016001000669067CAINDUSTRIAL DISTILLATE OIL79000021500                    Y080809080809080809080809
061280    00000017001000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                    Y080809080809080809080809
061280    00000018001000734067CAINDUSTRIAL NATURAL GAS   79000056900                    Y080809080809080809080809
061280    00000019001000669067CAINDUSTRIAL WOOD          79000000025                    Y080809080809080809080809
061280    00000020001000669067CAINDUSTRIAL PROCESS GAS   79000002350                    Y080809080809080809080809
061280    00000999001000799   CA
061280    00001000000000453067SG79
061280    00001001001000474067SARESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    00001001011000474067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    00001001351000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    00001001991000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    00001999001000474   CA
061280    00050000000000453067SG
061280    00050001011000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    00050001221000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    00050001701000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    00050999001000344   CA
061280    00611000000000453067SG79
061280    00611008351000409067SDCOMM-INST BITUMINOUS COAL79*        *                   Y080809080809080809080809
061280    00611999001000344   CA
061280    99999000000000453067SG79
061280    99999001991000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280    99999999001000344   CA
062238    00000000000000453067CG79
062238    00000000002000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
062238    00000023001000669067CACOMM-INST ON-SITE INCINER79000002350                    Y080809080809080809080809
062238    00000047001000604067CACIVIL AIRCRAFT LTO*S     79000005005                    Y080809080809080809080809
062238    00000060001000669067CAFOREST WILD FIRES        79         0000900             Y080809080809080809080809
062238    00000999001000664   CA
147840    00000000000000565074CG800040134213SMITH COUNTY         INDUSTRY           1120788223
147840    00000000002000136074 NWABASH
147840    00000001001000604074CARESIDENT ANTHRACITE COAL   000000001
147840    00000002001000604074CARESIDENT BITUMINOUS COAL   000000101
147840    00000003001000604074CARESIDENT DISTILLATE OIL    000000137
147840    00000005001000604074CARESIDENTIAL NATURAL GAS    000000042
```

Figure AST6-2 - continued. Sample Output

(Page 2 of 4)

BEST DOCUMENT AVAILABLE

BEST DOCUMENT AVAILABLE

```
                                               OUTPUT EIS/AS MASTER FILE                                                              PAGE    1

061280     000000000000000565067CG
061280     000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                    Y080809080809080809080809
061280     000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                    Y080809080809080809080809
061280     000000030010000734067CARESIDENT DISTILLATE OIL  79000004750                    Y080809080809080809080809
061280     000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                    Y080809080809080809080809
061280     000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                    Y080809080809080809080809
061280     000000060010000734067CARESIDENTIAL WOOD         79000000050                    Y080809080809080809080809
061280     000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                    Y080809080809080809080809
061280     000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                    Y080809080809080809080809
061280     000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                    Y080809080809080809080809
061280     000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                    Y080809080809080809080809
061280     000000110010000669067CACOMM-INST NATURAL GAS    79000006750                    Y080809080809080809080809
061280     000000120010000734067CACOMM-INST WOOD           79000000005                    Y080809080809080809080809
061280     000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000096750                    Y080809080809080809080809
061280     000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                    Y080809080809080809080809
061280     000000150010000734067CAINDUSTRIAL COKE          79000009850                    Y080809080809080809080809
061280     000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                    Y080809080809080809080809
061280     000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                    Y080809080809080809080809
061280     000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                    Y080809080809080809080809
061280     000000190010000669067CAINDUSTRIAL WOOD          79000000025                    Y080809080809080809080809
061280     000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                    Y080809080809080809080809
061280     000009990010000799   CA
061280     000010000000000453067SG79
061280     000010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280     000010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280     000010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280     000010019910000344067SDRESIDENT ANTHRACITE COAL 79000054850                    Y080809080809080809080809
061280     000019990010000474   CA
061280     005000000000000453067SG
061280     005000010110000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280     005000012210000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280     005000017010000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280     005009990010000344   CA
061280     006110000000000453067SG79
061280     006119990010000344   CA
061280     999900000000000453067SG79
061280     999900199910000344067SDRESIDENT ANTHRACITE COAL 79000059850                    Y080809080809080809080809
061280     999999940010000344   CA
062238     000000000000000453067CG79
062238     000000000002000136067 MAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
062238     000000230010000669067CACOMM-INST ON-SITE INCINER79000002350                    Y080809080809080809080809
062238     0000004/0010000604067CACIVIL AIRCRAFT LTO"S     79000005005                    Y080809080809080809080809
062238     000000600010000669067CAFOREST WILD FIRES        79         0000900             Y080809080809080809080809
062238     000049990010000669   CA
147840     000000000000000565074CG600040134213SMITH COUNTY        INDUSTRY            1120788223
147840     000000000002000136074 NWABASH
147840     000000010010000604074CARESIDENT ANTHRACITE COAL   000000001
147840     000000020010000604074CARESIDENT BITUMINOUS COAL   000000101
147840     000000030010000604074CARESIDENT DISTILLATE OIL    000000137
147840     000000050010000604074CARESIDENTIAL NATURAL GAS    000000042
147840     00[illegible]00080010000604074CACOMM-INST BITUMINOUS COAL  000000003
147840     [illegible]00090010000604074CACOMM-INST DISTILLATE OIL   000000023
```

Figure AST6-2 - continued. Sample Output

(Page 3 of 4)

```
                                               GENERATED NEDS TRANSACTIONS                                              PAGE     1

061280067                                       40123020010097508900235500050AA1
0612800672350034750421000039087500509875012340098502150000980569000252350    AA2
0612800677901                             MASTER FILE TEST DATA              AA7
0612800677902                             MASTER FILE TEST DATA              AA7
0612800677903                             MASTER FILE TEST DATA              AA7
0612800677904                             MASTER FILE TEST DATA              AA7
0612800677905                             MASTER FILE TEST DATA              AA7
0612800677906                             MASTER FILE TEST DATA              AA7
0612800677907                             MASTER FILE TEST DATA              AA7
0612800677908                             MASTER FILE TEST DATA              AA7
0612800677909                             MASTER FILE TEST DATA              AA7
0612800677910                             MASTER FILE TEST DATA              AA7
0612800677911                             MASTER FILE TEST DATA              AA7
0612800677912                             MASTER FILE TEST DATA              AA7
0612800677913                             MASTER FILE TEST DATA              AA7
0612800677914                             MASTER FILE TEST DATA              AA7
0612800677915                             MASTER FILE TEST DATA              AA7
0612800677916                             MASTER FILE TEST DATA              AA7
0612800677917                             MASTER FILE TEST DATA              AA7
0612800677918                             MASTER FILE TEST DATA              AA7
0612800677919                             MASTER FILE TEST DATA              AA7
0612800677920                             MASTER FILE TEST DATA              AA7
062238067791111133333444440000222233221144555666                             AA1
062238067791111133333444440000222233221144555666                             AA1
062238067           2350                0009876             950005           AA3
062238067    005005                                 0097500005032100009875012AA4
062238067                                  900                               AA5
062238067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES           AA6
0622380677923                             MASTER FILE TEST DATA              AA7
0622380677947                             MASTER FILE TEST DATA              AA7
0622380677960                             MASTER FILE TEST DATA              AA7
1478400748000197000300100001500055063803110930930000100010100137   00042     AA1
147840074    0000300023000310012         000037   000110003000007            AA2
147840074000947                           00056710008100065200082600001001216AA3
147840074    000365                  026700052500089     003096       0005303AA4
147840074000005      0000870009900224      012                          00052AA5
147840074WABASH                                                              AA6
147840074  010003000002000015000025000040000A7 EMISSION RECORDED             AA7
147840074  4300002000008000062000000000092ESTIMATES USED FOR A7-EMISSIONS    AA7
147840074  490003000002000015000025000040000A7 EMISSION RECORDED             AA7
1478600748000125013700120345900119063803110930930000100008100183   00096     AA1
147860074    0000400034000450025         000281   000620017000023            AA2
147860074001467                           00123400014500011840201000003003140AA3
147860074    000767                   006000567002070419000580100001480001578AA4
147860074000030      0001670028500649      012                          00080AA5
147860074WARREN                                                              AA6
147860074  140003000002100015102025000120000A7 EMISSION RECORDED             AA7
147860074  4300012000050000370000000000055ESTIMATES USED FOR A7-EMISSIONS    AA7
147860074  640003000002100015102025000120000A7 EMISSION RECORDED             AA7
31001501179                                                                  AA1
420680198800130006000900240002290001020306125145    00000500099     000130089AA1
420680198    00011          0001                  00006     00001            AA2
```

Figure AST6-2 - continued. Sample Output

(Page 4 of 4)

EIS/AS Test 7

Retrieve a Standard Answer File Using the COBOL Language and Produce a Detailed Report of the Answer File

In this test run, a standard answer file is retrieved from the EIS/AS master file using the cataloged procedure ECRTM30. This procedure executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and the generated retrieval program, CRTGENR (EC0100). A detailed report of the answer file is produced by using the cataloged procedure ECRPM20 which executes CRPMSTR (EC0130), the master file detailed report program.

CRTLNGP (EC0090) is the first of two EIS/AS programs used to retrieve data from the EIS/AS master file. The second program is CRTGENR (EC0100), the program generated by CRTLNGP (EC0090).

CRTLNGP (EC0090) uses the retrieval skeleton program CRTSKEL, which is stored in a cataloged source library, and the user-supplied retrieval specification cards to build CRTGENR (EC0100), which is referred to as the generated retrieval program.

The retrieval specification cards consist of retrieval control cards and retrieval request cards. The control cards indicate the beginning and end of the retrieval specifications: a $$SELECT card indicates the beginning of the retrieval specifications and a $$END card indicates the end of the retrieval specifications. Retrieval request cards follow the $$SELECT card and can be written in either the EIS/AS retrieval language or in COBOL. These cards precisely identify the data to be retrieved from the master file. When the EIS/AS retrieval language is used, up to 10 retrievals can be batched in one run, by preceding each retrieval by a $$SELECT card and entering a $$END card after the last retrieval.

The options allowed for CRTLNGP (EC0090) are entered on the first $$SELECT retrieval control card. The options specify whether the requests are written in the EIS/AS retrieval language or in COBOL, and whether or not description, category, or comment records are to be retrieved. The format of the retrieval control cards is illustrated in Figure AST7-1 and the definitions of the EIS/AS retrieval control card fields are provided in Figure AST7-2.

When the EIS/AS retrieval language is used, the user is allowed to select records from the EIS/AS master file based upon the value of specific fields in the master file records. The data names which can be used for these EIS/AS retrieval language requests are listed in Figure AST7-3. The EIS/AS retrieval language specifications are written in the format described in Figure AST7-4 and Figure AST7-5 provides definitions of the EIS/AS retrieval language specification fields. The EIS/AS retrieval specification load sheets are provided in Figure AST7-6.

If the COBOL language is used, the retrieval request cards are prepared according to COBOL rules for syntax and punctuation. Any retrieval that can be run using the EIS/AS retrieval language can also be run by specifying USER as the language keyword (see Figure AST7-1) and using the COBOL language, but, nothing is gained in these retrievals by using COBOL when the EIS/AS retrieval language can be used. There are some retrievals which cannot be accomplished using the EIS/AS retrieval language. This is when COBOL retrievals become very beneficial. In addition to this test, Test 16 also demonstrates the use of COBOL retrievals.

CRTGENR (EC0100) is produced based on the retrieval specifications entered into CRTLNGP (EC0090). This generated retrieval program must be compiled and link edited before it is executed. When it is executed, it reads the EIS/AS master file and selects those records which satisfy the retrieval specifications that were entered into CRTLNGP (EC0090). The selected records are written to an output file which is referred to as an EIS/AS answer file. This file is only a subset of the master file; any changes made to the answer file during the retrieval process are not reflected in the master file. The answer file has the same format as the EIS/AS master file and may be used as input to any EIS/AS program which uses the master file as input.

This test demonstrates how the user can resubmit data from the EIS/AS master file to NEDS even though the flags in the master file indicate that the data has already been sent to NEDS. The status flags in the answer file produced by this retrieval have been set to A to indicate that the data has not been sent to NEDS. Now, the answer file can be input to CRPASNA (EC0120) and the annual report can be submitted again (see Test 8).

CRPMSTR (EC0130) produces a detailed report of the EIS/AS master file. Each field in each master file record appears under an identifying heading. This report may be used as a management report or in verifying data in the master file.

The maximum number of lines per printed page can be specified by the user in card columns one and two of the option card. This option can reduce the amount of paper used by those users who have standard 11 x 14 inch output forms and the ability to print eight lines per inch. If no option card is given or the line specification on the option card is not between 20 and 85 a default of 60 lines is used.

The run stream for this test run contains the JCL necessary for retrieving a standard answer file from an EIS/AS master file. This run stream is shown in Figure AST7-7 and the sample output produced by this run stream is shown in Figure AST7-8.

The first cataloged procedure executed by this run stream is ECRTM30. Through the use of substitutable parameters, the input master file is specified as ECMSTR4 (created in Test 6) and the output answer file is named ECMSTR5. Also, note that the output answer file will be cataloged. The user must supply the appropriate DD (data definition) information for the input retrieval specification card file in the GENER step. In this test run, the input retrieval specification cards are used to produce a standard answer file in which all the status flags are A (add).

The next cataloged procedure executed by this run stream is ECRPM20. A substitutable parameter is used to specify ECMSTR5 as the input master file. The user must supply the DD information for the option card file in the LIST step. No option card is provided in this run stream, therefore the default option is in effect.

Record Position	Field Length	Description
1 - 8	8	Card Type
9	1	Unused
10 - 13	4	Language Keyword
14	1	Unused
15	1	Description Selection Field
16	1	Unused
17	1	Category Selection Field
18	1	Unused
19	1	Comment Selection Field
20 - 80	61	Unused

Figure AST7-1. EIS/AS Retrieval Control Card

Card Type: Identifies the type of control card.

Valid Codes: $$SELECT - Specifies the beginning of a retrieval request.
$$END - Specifies the end of a retrieval request and must appear alone on the card.
Field Length: 8 characters

Language Keyword: Identifies the type of retrieval language to be used.
Valid Codes: USER - Retrieval specifications will be COBOL language statements.
blank - Retrieval specifications will be EIS/AS retrieval language statements.
Field Length: 4 characters

Description Selection Field: Indicates whether or not description records are to be retrieved.
Valid Codes: 0 - Select description records.
blank - Do not select description records.
0 is the default value used when all three selection fields are blank.
Field Length: 1 character

Category Selection Field: Indicates whether or not category records are to be retrieved.
Valid Codes: 1 - Select category records.
blank - Do not select category records.
1 is the default value used when all three selection fields are blank.
Field Length: 1 character

(Page 1 of 2)

Figure AST7-2. Definition of EIS/AS Retrieval Control Card Fields

Comment Record Field: Indicates whether or not comment records are to be retrieved.

Valid Codes:	2 - Select comment records. blank - Do not select comment records. Blank is the default value used when all three selection fields are blank.
Field Length:	1 character

(Page 2 of 2)

Figure AST7-2 - continued. Definition of EIS/AS Retrieval Control Card Fields

Valid Data Names for Retrieval - All Records

The following data names can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

Data Name	Field Length
AQCR	3
CATEGORY-DISAGGREG-NBR	2
CATEGORY-NUMBER	3
COUNTY	4
GEOG-SUBALLOCATION-NBR	5
LINE-NUMBER	3
RECORD-TYPE	2
RECORD-TYPE-KEY	1
STATE	2

(Page 1 of 8)

Figure AST7-3. Valid Retrieval Data Names

Valid Data Names for Retrieval - Description Record

The following data names from the description record can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

Data Name	Field Length	Data Name	Field Length
AIR-BASIN	3	SIP-ESTIMATE-CO	5
ASH-ANTHRACITE-COAL	3	SIP-ESTIMATE-HC	5
ASH-BITUMINOUS-COAL	3	SIP-ESTIMATE-NO_x	4
ASSOC-PLANT-ID	4	SIP-ESTIMATE-SO_2	4
DAY-CODE	3	SIP-ESTIMATE-TSP	5
DEFINED-AREA-CODE	3	SMSA	4
HEAVY-DUTY-DIESEL	6	SOURCE-TYPE	1
HEAVY-DUTY-VEHICLE	6	SUBALLOC-TECH-CODE	2
LENGTH-AREA	7	SUBURBAN	6
LENGTH-AREA-UNITS-CODE	2	SULFUR-ANTHRACITE-COAL	2
LIGHT-DUTY-VEHICLE	6	SULFUR-BITUMINOUS-COAL	2
LIMITED-ACCESS	6	SULFUR-DISTILLATE-OIL	2
MAJOR-ACTIVITY	20	SULFUR-RESIDUAL-OIL	2
POPULATION	8	URBAN	7
POPULATION-CODE	1	UTM-HORIZONTAL-1	4
PROJECTED-YEAR	2	UTM-HORIZONTAL-2	4
RURAL	6	UTM-HORIZONTAL-3	4
RURAL-POPULATION-PERCENT	2	UTM-HORIZONTAL-4	4
SIP-BASE-YEAR	2	UTM-HORIZONTAL-5	4
		UTM-HORIZONTAL-6	4

(Page 2 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval - Description Record (continued)

Data Name	Field Length	Data Name	Field Length
UTM-VERTICAL-1	5	UTM-ZONE-1	2
UTM-VERTICAL-2	5	UTM-ZONE-2	2
UTM-VERTICAL-3	5	UTM-ZONE-3	2
UTM-VERTICAL-4	5	UTM-ZONE-4	2
UTM-VERTICAL-5	5	UTM-ZONE-5	2
UTM-VERTICAL-6	5	UTM-ZONE-6	2
		YEAR	2

The following names can only be referenced in COBOL language specifications:

AQCR-NAME
AREA-NAME
EIS-FLAG-CARD-0-1
EIS-FLAG-CARD-0-2
EIS-FLAG-CARD-0-3
EIS-FLAG-CARD-0-4
EIS-FLAG-CARD-0-5
EIS-FLAG-CARD-0-6
NEDS-A1-FLAG
NEDS-A3-FLAG
NEDS-A4-FLAG
SUBALLOC-TECH-DESC

(Page 3 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval - Description Record Repeating Names

The following data names from the repeating section of the description record can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

Data Name	Field Length
AQMA-NUMBER	6
ATTAINMENT-STATUS	1
DESC-POLLUTANT-ID	5

The following data names can only be referenced in COBOL language specifications:

DESC-POLLUTANT-NAME
EIS-FLAG-CARD-0-7

(Page 4 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval - Category Record

The following data names from the category record can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

Data Name	Field Length	Data Name	Field Length
APRIL-THRUPUT	2	HOUR-11-THRUPUT	2
ASH-PERCENTAGE	3	HOUR-12-THRUPUT	2
AUGUST-THRUPUT	2	HOUR-13-THRUPUT	2
CATEGORY-ADJUST	7	HOUR-14-THRUPUT	2
DATA-CONFIDENCE-RATING	1	HOUR-15-THRUPUT	2
DAYS-PER-WEEK	1	HOUR-16-THRUPUT	2
DECEMBER-THRUPUT	2	HOUR-17-THRUPUT	2
FEBRUARY-THRUPUT	2	HOUR-18-THRUPUT	2
HEAT-CONTENT	4	HOUR-19-THRUPUT	2
HOUR-0-THRUPUT	2	HOUR-20-THRUPUT	2
HOUR-1-THRUPUT	2	HOUR-21-THRUPUT	2
HOUR-2-THRUPUT	2	HOUR-22-THRUPUT	2
HOUR-3-THRUPUT	2	HOUR-23-THRUPUT	2
HOUR-4-THRUPUT	2	HOURS-PER-DAY	2
HOUR-5-THRUPUT	2	INFORMATION-SOURCE-CODE	1
HOUR-6-THRUPUT	2	JANUARY-THRUPUT	2
HOUR-7-THRUPUT	2	JULY-THRUPUT	2
HOUR-8-THRUPUT	2	JUNE-THRUPUT	2
HOUR-9-THRUPUT	2	MARCH-THRUPUT	2
HOUR-10-THRUPUT	2		

(Page 5 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval - Category Record (continued)

Data Name	Field Length	Data Name	Field Length
MAX-HRLY-THRUPUT	10	SULFUR-PERCENTAGE	2
MAY-THRUPUT	2	THRUPUT-RATIO	4
NITROGEN-PERCENTAGE	3	UNIFORM-HOURLY-THRUPUT	1
NOVEMBER-THRUPUT	2	UNIFORM-THRUPUT	1
OCTOBER-THRUPUT	2	UNITS-CODE	2
PROCESS-RATE	9	WEEKS-PER-YEAR	2
SEPTEMBER-THRUPUT	2	YEAR-OF-INFORMATION	2

The following data names can only be referenced in COBOL language specifications:

CATEGORY-DESC
EIS-FLAG-CARD-1-1
EIS-FLAG-CARD-1-2
EIS-FLAG-CARD-1-3
EIS-FLAG-CARD-1-4
INFORMATION-SOURCE-NARRATIVE
NEDS-A7-COMMENT
NEDS-A7-FLAG
NEDS-FLAG
UNITS-CODE-DESCRIPTION

(Page 6 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval - Category Record Repeating Names

The following data names from the repeating section of the category record can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

Data Name	Field Length
CAT-POLLUTANT-ID	5
CONFIDENCE-RATING	1
EMF-CONFIDENCE-RATING	1
EMF-ORIGIN	1
EMF-SOURCE-CODE	1
EMISSIONS-ESTIMATE	7
EMISSION-FACTOR	10
MAXIMUM-HOURLY-EMISSION	6
NEDS-A7-EMISSION	7
POLLUTANT-SPECIFIC-DATA	10

The following data names can only be referenced in COBOL language specifications:

CAT-POLLUTANT-NAME
EIS-FLAG-CARD-1-5

(Page 7 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval - Comment Record

The following data names from the comment record can be referenced only in COBOL language specifications:

Data Name

EIS-FLAG-CARD-2-1
EIS-FLAG-CARD-2-2
LEFT-COMMENT
NEDS-A6-FLAG

Data Name

NEDS-COMMENT
RIGHT-COMMENT
TOTAL-COMMENT

(Page 8 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

Record Position	Field Length	Description
1 - 31	31	Subject Name
32	1	Unused
33	1	Negation Flag
34	1	Unused
35	1	Relational Operator
36	1	Unused
37 - 67	31	Object Name
68	1	Unused
69 - 71	3	Boolean Operator
72 - 80	9	Unused

Figure AST7-4. EIS/AS Retrieval Language Specification Fields

Subject Name: Specifies the name of the field in the EIS/AS master file record to be compared with the literal or the master file field name specified by the object name.

Valid Codes: Only those fields listed in Figure AST7-3 can be used. The spelling, including hyphens, must match exactly.

Field Length: 31 characters

Negation Flag: Indicates whether the Boolean NOT condition is in effect.

Valid Codes: N - Boolean NOT is in effect.
blank - Boolean NOT is not in effect.

Field Length: 1 character

Relational Operator: Indicates the relationship to be tested between the subject name and the object name.

Valid Codes:	=	equal
	<	less than
	>	greater than

Field Length: 1 character

Object Name: A literal to be compared against the master file field specified by the subject name, or the name of a master file field to be compared against the master file field specified by the subject name (e.g., subject name = object name).

Valid Codes: If a literal is used, it must be enclosed in quotes. The length of the literal must be exactly the same as the field length of the data name being compared (see Figure AST7-3). If the name of a field from the master file is used, it must match exactly one of the names listed in Figure AST7-3. However, it must not be enclosed in quotes.

(Page 1 of 2)

Figure AST7-5. Definitions of EIS/AS Retrieval Language Specification Fields

Field Length: 31 characters

Boolean Operator: Identifies the type of connector used between the relationships specified on two succeeding control cards.

Valid Codes: AND - Indicates that both relationships must be true in order for the entire relationship to be true.

OR - Indicates that if either relationship is true, the entire relationship is true.

blank - Indicates that there is no connector, and therefore, that there is no further specification.

Field Length: 3 characters

(Page 2 of 2)

Figure AST7-5 - continued. Definitions of EIS/AS Retrieval Language Specification Fields

AGENCY ____________

EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
RETRIEVAL SPECIFICATIONS

BY ____________
DATE ____________
PAGE ___ OF ____________

SEE BACK OF FORM FOR VALID CODES

	USER KEYWORD	DESC	CAT	COMM
1 8	10 13	15	17	19
S S S E L E C T				

SUBJECT NAME	NF	RO	OBJECT NAME (LITERALS MUST BE ENCLOSED IN SINGLE QUOTES)	SO
1 31	33	35	37 67	69 71

1 5
S S E N D

BEST DOCUMENT AVAILABLE

Figure AST7-6. Retrieval Specification Load Sheets (Page 1 of 2)

EMISSIONS INVENTORY SYSTEM / AREA SOURCE (EIS/AS)
RETRIEVAL SPECIFICATIONS

VALID VALUES FOR
NEGATION FLAG (NF):
BLANK, N
RELATIONAL OPERATOR (RO):
=EQUAL
>GREATER THAN
<LESS THAN
BOOLEAN OPERATOR (BO):
AND, OR, BLANK
TYPE: N = NUMERIC
A = ALPHANUMERIC

DATA NAMES VALID FOR ALL RECORDS

NAME	LENGTH	TYPE
AQCR	3	N
CATEGORY-DISAGGREG-NBR	2	N
CATEGORY-NUMBER	3	N
COUNTY	4	N
GEOG-SUBALLOCATION-NBR	5	N
LINE-NUMBER	3	N
RECORD-TYPE	2	A
RECORD-TYPE-KEY	1	A
STATE	2	N

CATEGORY REPEATING DATA NAMES

NAME	LENGTH	TYPE
CAT-POLLUTANT-ID	5	N
CONFIDENCE-RATING	1	N
EMF-CONFIDENCE-RATING	1	N
EMF-ORIGIN	1	A
EMF-SOURCE-CODE	1	A
EMISSIONS-ESTIMATE	7	N
EMISSION-FACTOR	10(3)	N
MAXIMUM-HOURLY- SS EMISSION	6	N
NEDS-A7-EMISSION	7	N
POLLUTANT-SPECIFIC DATA	10	A

DESCRIPTION REPEATING DATA NAMES

NAME	LENGTH	TYPE
AQMA-NUMBER	6	A
ATTAINMENT-STATUS	1	A
DESC-POLLUTANT-ID	5	N

CATEGORY RECORD DATA NAMES

NAME	LENGTH	TYPE
APRIL-THRUPUT	2	N
ASH-PERCENTAGE	3(1)	N
AUGUST-THRUPUT	2	N
CATEGORY-ADJUST	7	N
DATA-CONFIDENCE-RATING	1	N
DAYS-PER-WEEK	1	N
DECEMBER-THRUPUT	2	N
FEBRUARY-THRUPUT	2	N
HEAT-CONTENT	4	N
HOUR-0-THRUPUT	2	N
HOUR-1-THRUPUT	2	N
HOUR-2-THRUPUT	2	N
HOUR-3-THRUPUT	2	N
HOUR-4-THRUPUT	2	N
HOUR-5-THRUPUT	2	N
HOUR-6-THRUPUT	2	N
HOUR-7-THRUPUT	2	N
HOUR-8-THRUPUT	2	N
HOUR-9-THRUPUT	2	N
HOUR-10-THRUPUT	2	N
HOUR-11-THRUPUT	2	N
HOUR-12-THRUPUT	2	N
HOUR-13-THRUPUT	2	N
HOUR-14-THRUPUT	2	N
HOUR-15-THRUPUT	2	N
HOUR-16-THRUPUT	2	N
HOUR-17-THRUPUT	2	N
HOUR-18-THRUPUT	2	N
HOUR-19-THRUPUT	2	N
HOUR-20-THRUPUT	2	N
HOUR-21-THRUPUT	2	N
HOUR-22-THRUPUT	2	N
HOUR-23-THRUPUT	2	N
HOURS-PER-DAY	2	N
INFORMATION-SOURCE-CODE	1	A
JANUARY-THRUPUT	2	N
JULY-THRUPUT	2	N
JUNE-THRUPUT	2	N
MARCH-THRUPUT	2	N
MAX-HRLY-THRUPUT	10	A
MAY-THRUPUT	2	N
NITROGEN-PERCENTAGE	3(3)	N
NOVEMBER-THRUPUT	2	N
OCTOBER-THRUPUT	2	N
PROCESS RATE	9	N
SEPTEMBER-THRUPUT	2	N
SULFUR-PERCENTAGE	2(1)	N
THRUPUT-RATIO	4(1)	N
UNIFORM-HOURLY-THRUPUT	1	A
UNIFORM-THRUPUT	1	A
UNITS-CODE	2	N
WEEK-PER-YEAR	2	N
YEAR-OF-INFORMATION	2	N

DESCRIPTION RECORD DATA NAMES

NAME	LENGTH	TYPE
AIR-BASIN	3	N
ASH-ANTHRACITE-COAL	3(1)	N
ASH-BITUMINOUS-COAL	3(1)	N
ASSOC-PLANT-ID	4	N
DAY-CODE	3	N
DEFINED-AREA-CODE	3	N
HEAVY-DUTY-DIESEL	6	N
HEAVY-DUTY-VEHICLE	6	N
LENGTH-AREA	7(2)	N
LENGTH-AREA-UNITS-CODE	2	A
LIGHT-DUTY-VEHICLE	7	N
LIMITED-ACCESS	6	N
MAJOR-ACTIVITY	20	A
POPULATION	8	N
POPULATION-CODE	1	A
PROJECTED-YEAR	2	N
RURAL	6	N
RURAL-POPULATION-PERCENT	2	N
SIP-BASE-YEAR	2	N
SIP-ESTIMATE-CO	5	N
SIP-ESTIMATE-HC	5	N
SIP-ESTIMATE-NOX	4	N
SIP-ESTIMATE-SO2	4	N
SIP-ESTIMATE-TSP	5	N
SMSA	4	A
SOURCE-TYPE	1	A
SUBALLOC-TECH-CODE	2	A
SUBURBAN	6	N
SULFUR-ANTHRACITE-COAL	2(1)	N
SULFUR-BITUMINOUS-COAL	2(1)	N
SULFUR-DISTILLATE-OIL	2(1)	N
SULFUR-RESIDUAL-OIL	2(1)	N
URBAN	7	N
UTM-HORIZONTAL-1	4(1)	N
UTM-HORIZONTAL-2	4(1)	N
UTM-HORIZONTAL-3	4(1)	N
UTM-HORIZONTAL-4	4(1)	N
UTM-HORIZONTAL-5	4(1)	N
UTM-HORIZONTAL-6	4(1)	N
UTM-VERTICAL-1	5(1)	N
UTM-VERTICAL-2	5(1)	N
UTM-VERTICAL-3	5(1)	N
UTM-VERTICAL-4	5(1)	N
UTM-VERTICAL-5	5(1)	N
UTM-VERTICAL-6	5(1)	N
UTM-ZONE-1	2	N
UTM-ZONE-2	2	N
UTM-ZONE-3	2	N
UTM-ZONE-4	2	N
UTM-ZONE-5	2	N
UTM-ZONE-6	2	N
YEAR	2	N

UMBERS IN PARENTHESES INDICATE ASSUMED DECIMAL POSITIONS

(Page 2 of 2)

Figure AST7-6 - continued. Retrieval Specification Load Sheets

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```
//ASTEST07 JOB    (ACCOUNTING INFO)
//*
//*   RETRIEVE A STANDARD ANSWER FILE FROM THE MASTER FILE
//*   AND PRODUCE A DETAILED REPORT OF THE ANSWER FILE
//*
//TEST07A EXEC ECHTM30,
//       DISP='NEW,CATLG,DELETE',
//       MSTRFIL=FCMSTR4,
//       ANSRFIL=FCMSTR5
//*
//*   RETRIEVE RECORDS FROM THE OUTPUT MASTER FILE IN TEST 63
//*   REPLACE WITH 'A' ALL DATA FLAGS THAT SHOW 'S',
//*   IN ORDER TO RESUBMIT THE MASTER FILE DATA TO NFDS
//*
//GENER.INPUT DD *
$$SELECT USER 0 1 2
          IF RECORD-IS-DESCRIPTION
            PERFORM USER-DESC-PARA THRU USER-DESC-PARA-END
          ELSE
            IF RECORD-IS-CATEGORY
              PERFORM USER-CAT-PARA THRU USER-CAT-PARA-END
            ELSE
              PERFORM USER-COMM-PARA THRU USER-COMM-PARA-END.
          PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END.
          GO TO USER-QUALIFICATION-END.
        USER-DESC-PARA.
          IF NFDS-A1-FLAG EQUAL TO 'S'
            MOVE 'A' TO NFDS-A1-FLAG.
          IF NFDS-A3-FLAG EQUAL TO 'S'
            MOVE 'A' TO NFDS-A3-FLAG.
          IF NFDS-A4-FLAG EQUAL TO 'S'
            MOVE 'A' TO NFDS-A4-FLAG.
          IF EIS-FLAG-CARD-0-1 EQUAL TO 'S'
            MOVE 'A' TO EIS-FLAG-CARD-0-1.
          IF EIS-FLAG-CARD-0-2 EQUAL TO 'S'
            MOVE 'A' TO EIS-FLAG-CARD-0-2.
          IF EIS-FLAG-CARD-0-3 EQUAL TO 'S'
            MOVE 'A' TO EIS-FLAG-CARD-0-3.
          IF EIS-FLAG-CARD-0-4 EQUAL TO 'S'
            MOVE 'A' TO EIS-FLAG-CARD-0-4.
          IF EIS-FLAG-CARD-0-5 EQUAL TO 'S'
            MOVE 'A' TO EIS-FLAG-CARD-0-5.
          IF EIS-FLAG-CARD-0-6 EQUAL TO 'S'
            MOVE 'A' TO EIS-FLAG-CARD-0-6.
          MOVE BINARY-1 TO DESC-SUB.
          PERFORM USER-DESC-REPEAT-PARA
                  DESC-NBR-PULL TIMES.
        USER-DESC-PARA-END.
          EXIT.
        USER-DESC-REPEAT-PARA.
          IF EIS-FLAG-CARD-0-7 (DESC-SUB) EQUAL TO 'S'
            MOVE 'A' TO EIS-FLAG-CARD-0-7 (DESC-SUB).
          ADD BINARY-1 TO DESC-SUB.
        USER-DESC-REPEAT-PARA-END.
          EXIT.
        USER-CAT-PARA.
          IF NFDS-FLAG EQUAL TO 'S'
            MOVE 'A' TO NFDS-FLAG.
          IF NFDS-A7-FLAG EQUAL TO 'S'
            MOVE 'A' TO NFDS-A7-FLAG.
          IF EIS-FLAG-CARD-1-1 EQUAL TO 'S'
```

(Page 1 of 2)

Figure AST7-7. Run Stream

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```
          MOVE 'A' TO EIS-FLAG-CARD-1-1.
        IF EIS-FLAG-CARD-1-2 EQUAL TO 'S'
          MOVE 'A' TO EIS-FLAG-CARD-1-2.
        IF EIS-FLAG-CARD-1-3 EQUAL TO 'S'
          MOVE 'A' TO EIS-FLAG-CARD-1-3.
        IF EIS-FLAG-CARD-1-4 EQUAL TO 'S'
          MOVE 'A' TO EIS-FLAG-CARD-1-4.
        MOVE BINARY-1 TO CAT-SUB.
        PERFORM USER-CAT-REPEAT-PARA
             CAT-NBR-FULL TIMES.
      USER-CAT-PARA-END.
        EXIT.
      USER-CAT-REPEAT-PARA.
          IF EIS-FLAG-CARD-1-5 (CAT-SUB) EQUAL TO 'S'
            MOVE 'A' TO EIS-FLAG-CARD-1-5 (CAT-SUB).
        ADD BINARY-1 TO CAT-SUB.
      USER-CAT-REPEAT-PARA-END.
        EXIT.
      USER-COMM-PARA.
        IF NEDS-A6-FLAG EQUAL TO 'S'
          MOVE 'A' TO NEDS-A6-FLAG.
        IF EIS-FLAG-CARD-2-1 EQUAL TO 'S'
          MOVE 'A' TO EIS-FLAG-CARD-2-1.
        IF EIS-FLAG-CARD-2-2 EQUAL TO 'S'
          MOVE 'A' TO EIS-FLAG-CARD-2-2.
      USER-COMM-PARA-END.
        EXIT.
$$END
//TEST07B EXEC ECRPM20,
//       MSTRFIL=FCMSTR5
//*
//*   GENERATE A DETAILED REPORT OF THE OUTPUT MASTER
//*   FILE FROM STEP A
//*
//LIST.OPTIONS DD *
```

(Page 2 of 2)

Figure AST7-7 - continued. Run Stream

```
                              EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                       PAGE     1

PROGRAM NAME: CRTLNGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


INPUT (CONTROL CARDS):
$$SELECT USER 0 1 2
           IF RECORD-IS-DESCRIPTION
             PERFORM USER-DESC-PARA THRU USER-DESC-PARA-END
           ELSE
             IF RECORD-IS-CATEGORY
               PERFORM USER-CAT-PARA THRU USER-CAT-PARA-END
             ELSE
               PERFORM USER-COMM-PARA THRU USER-COMM-PARA-END.
           PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END.
           GO TO USER-QUALIFICATION-END.
         USER-DESC-PARA.
           IF NEDS-A1-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-A1-FLAG.
           IF NEDS-A3-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-A3-FLAG.
           IF NEDS-A4-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-A4-FLAG.
           IF EIS-FLAG-CARD-0-1 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-1.
           IF EIS-FLAG-CARD-0-2 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-2.
           IF EIS-FLAG-CARD-0-3 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-3.
           IF EIS-FLAG-CARD-0-4 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-4.
           IF EIS-FLAG-CARD-0-5 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-5.
           IF EIS-FLAG-CARD-0-6 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-6.
           MOVE BINARY-1 TO DESC-SUB.
           PERFORM USER-DESC-REPEAT-PARA
                   DESC-NUM-FULL TIMES.
         USER-DESC-PARA-END.
           EXIT.
         USER-DESC-REPEAT-PARA.
           IF EIS-FLAG-CARD-0-7 (DESC-SUB) EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-7 (DESC-SUB).
           ADD BINARY-1 TO DESC-SUB.
         USER-DESC-REPEAT-PARA-END.
           EXIT.
         USER-CAT-PARA.
           IF NEDS-FLAG EQUAL TO 'S'
```

Figure AST7-8. Sample Output (Page 1 of 5)

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```
             MOVE 'A' TO NEDS-FLAG.
           IF NEDS-A7-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-A7-FLAG.
           IF EIS-FLAG-CARD-1-1 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-1-1.
           IF EIS-FLAG-CARD-1-2 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-1-2.
           IF EIS-FLAG-CARD-1-3 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-1-3.
           IF EIS-FLAG-CARD-1-4 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-1-4.
           MOVE BINARY-1 TO CAT-SUB.
           PERFORM USER-CAT-REPEAT-PARA
                CAT-NBR-PULL TIMES.
         USER-CAT-PARA-END.
           EXIT.
         USER-CAT-REPEAT-PARA.
             IF EIS-FLAG-CARD-1-5 (CAT-SUB) EQUAL TO 'S'
               MOVE 'A' TO EIS-FLAG-CARD-1-5 (CAT-SUB).
           ADD BINARY-1 TO CAT-SUB.
         USER-CAT-REPEAT-PARA-END.
           EXIT.
         USER-COMM-PARA.
           IF NEDS-A6-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-A6-FLAG.
           IF EIS-FLAG-CARD-2-1 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-2-1.
           IF EIS-FLAG-CARD-2-2 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-2-2.
         USER-COMM-PARA-END.
           EXIT.
$SEND


NUMBER OF CONTROL CARDS READ:                        74
NUMBER OF RETRIEVAL SKELETON RECORDS READ:          837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:         963
NUMBER OF CONDITIONAL MESSAGES:                       0
NUMBER OF ABORT MESSAGES:                             0

PROGRAM NAME: CRTLNGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

Figure AST7-8 - continued. Sample Output (Page 2 of 5)

```
                    EIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: CRTGENR (EC0100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF MASTER FILE RECORDS READ:       371
NUMBER OF MASTER FILE RECORDS WRITTEN:    371
NUMBER OF CONDITIONAL MESSAGES:             0
NUMBER OF ABORT MESSAGES:                   0
```

```
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
                              AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                          DIAGNOSTIC REPORT                                    PAGE    1

PROGRAM NAME: CRPMSTR (EC0130)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION IN EFFECT: NO VALID OPTION SPECIFIED, DEFAULT OF 60 LINES PER PAGE ASSUMED


NUMBER OF RECORDS READ:                 371
NUMBER OF DESCRIPTION RECORDS:           18
NUMBER OF CATEGORY RECORDS:             334
NUMBER OF COMMENT RECORDS:               19
```

Figure AST7-8 - continued. Sample Output
(Page 3 of 5)

BEST DOCUMENT AVAILABLE

```
                                   AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                  FILE LISTING                                                         PAGE   139

****************
**DESCRIPTION**    STATE    COUNTY    AQCR    AQCR NAME                                      PLANT ID   GEOG SUB #    SMSA   BATCH
****************   ------------------------------------------------------------------------------------------------------------------
                    31       0015      011    WESTERN PART OF STATE OO                          0195        00367       1257      0

  RECORD    CATEGORY     CATEGORY      AIR      DEFINED     AREA                          MAJOR            SUBALLOCATION TECHNIQUE
   TYPE      NUMBER      DISAG  #     BASIN    AREA CODE    NAME                          ACTIVITY             CODE   DESCRIPTION
-------------------------------------------------------------------------------------------------------------------------------------
    SG        000          00          011        123       CADE'S COVE                   FARMING                15     CAASE

   DATE      SIP BASE     PROJ'D     SOURCE             LENGTH          POP          POPULATION          NUMBER  UTM      NUMBER  OF
  YR/DAY       YEAR        YEAR       TYPE          AREA    UNITS CD    CODE     RUR %        TOTAL      COORDINATES      POLLUTANTS
-------------------------------------------------------------------------------------------------------------------------------------
  79/303        79          83          A          137.59      12                  50       101,234          2                16

                                                             UTM  COORDINATES
  01  HORIZ     VERT      02  HORIZ     VERT      03  HORIZ     VERT       04  HORIZ     VERT       05  HORIZ     VERT      06  HORIZ     VERT
  ----------------        ----------------        ----------------         ----------------         ----------------        ----------------
  16  550.0  4310.0       16  535.1  4320.1

         SULFUR  CONTENTS                  ASH  CONTENTS                GAS FUEL              DIESEL FUEL                  MOTOR   VEHICLE   MILES
 ANTH     BITUM     DIST    RESD'L         ANTH     BITUM               VEHICLES               VEHICLES     LIMITED ACCESS    RURAL      SUB  URBAN       URBAN
 COAL      COAL      OIL     OIL           COAL      COAL           LIGHT         HEAVY          HEAVY            ROADS         ROADS        ROADS         ROADS
 ---------------------------------       --------------        -------------------------      -----------    ------------------------------------------------------

   FLAG    EIS   FLAGS                                      SIP ESTIMATES
 NEDS A1   1 2 3 4 5 6          TSP           SO2            NOX           HC               CO
 -------   -----------      ----------------------------------------------------------------------
    A      A A A A A A          125           137            12          3,459             119

       ***     POLLUTANT                          ATTAINMENT     AQMA      EIS      ***     POLLUTANT                              ATTAINMENT      AQMA      EIS      ***
       ***    ID        NAME                        STATUS      NUMBER     F 7      ***    ID       NAME                             STATUS       NUMBER     F 7      ***
       -------------------------------------------------------------------------------------------------------------------------------------------------------------
       ***   11101     TSP                             O         000123     A       ***   11103     BENZENE ORGNICS                    A          000123      A       ***
       ***   44101     TOTAL OXIDANTS                  O         000123     A       ***   44201     OZONE                              A          000123      A       ***
       ***   42101     CO                              O         000123     A       ***   42102     CO2                                A          000123      A       ***
       ***   43102     NONMETH HC                      O         000123     A       ***   43502     FORMALDEHYDE                       A          000123      A       ***
       ***   22306     NITRATES                        O         000123     A       ***   22403     SULFATES                           A          000123      A       ***
       ***   42603     NOX                             O         000123     A       ***   43101     HC                                 A          000123      A       ***
       ***   42601     NO                              O         000123     A       ***   42602     NO2                                A          000123      A       ***
       ***   42401     SO2                             O         000123     A       ***   42402     HYDROGEN SULFDE                    A          000123      A       ***

************
**COMMENT**          STATE      COUNTY      AQCR        GEOG          CATEGORY     CATEGORY      COMMENT                     FLAGS                BATCH
**RECORD **                                          SUBALLOC #        NUMBER      DISAG  #       TYPE       NEDS A6      EIS 1     EIS 2         CODE
************         -------------------------------------------------------------------------------------------------------------------------------
                      31         0015        011         00367           000           00           EIS           A            A         A            0

                     LINE #      COMMENTS
                     -------------------------------------------------------------------------------------------------------------------------------
                      001        AREA IS BOUNDED BY ROUTES 17,35,49, AND 1001A
                      002        THREE FACTORIES, ONE AIRSTRIP, ONE QUARRY AND    15 FARMS INCLUDED, REST IS URBAN.
```

Figure AST7-8 - continued. Sample Output (Page 4 of 5)

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```
                                       AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                        FILE LISTING                                                  PAGE   140

****************
**CATEGORY 234**          STATE     COUNTY     AQCR     GEOG SUBALLOC #     CATEGORY #     CATEGORY DISAG #     BATCH
****************          -------------------------------------------------------------------------------------------
                            31       0015      011          00367              234               01               0

RECORD    RECORD      CATEGORY                              CATEGORY       PROCESS        UNITS             NORMAL OPERATING     THRUPUT
YEAR      TYPE       DESCRIPTION                           ADJUSTMENT       RATE      CODE  DESCRIPTION     HR/D D/WK  WK/YR      RATIO
-------------------------------------------------------------------------------------------------------------------------------------
1979      SD         CAT 100 DISAG 10                          10            1597                             24    7     52        1.3

  UNIFORM                       MONTHLY THRUPUT PERCENTAGES                                      PERCENTAGES OF             HEAT
  THRUPUT   JAN   FEB   MAR   APR   MAY   JUN   JUL   AUG   SEP   OCT   NOV   DEC      NITROGEN    SULFUR      ASH      CONTENT
  -------------------------------------------------------------------------------      --------------------------------------------
    YES       8     8     9     8     6     9     8     8     9     8     8     9        .036        7.1       10.2       0034

 UNIFORM                                                      HOURLY THRUPUT PERCENTAGES
 THRUPUT  0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
 ------------------------------------------------------------------------------------------------------------------------------------
  YES        4    4    4    4    4    5    4    4    4    4    4    5    4    4    4    4    4    5    4    4    4    4    4    5

 MAX HRLY   DATA CONF        EIS FLAG     NEDS    NEDS A7                                    INFORMATION SOURCE           NUMBER OF
 THRUPUT     RATING        1  2  3  4     FLAG   FLAG  COMMENT                               CODE      NARRATIVE          POLLUTANTS
 --------   ---------     ------------------    -----------------------------------------    ------------------------    ----------
                 1          A  A  A  A     A       A                                          L        LOCAL GOVRNMT          16

  POLLUTANT                      POLLUTANT         EMISSION         EM FAC      EM FAC   EM FAC    EMISSIONS     NEDS A7   MAX HOURLY     CONF   FLAG
  ID    NAME                   SPECIFIC DATA        FACTOR         CONF RTNG    SOURCE   ORIGIN    ESTIMATES     EMISSION  MAX HOURLY     RTNG  EIS 5
 ---------------------         -------------      ---------       ---------    ------   ------    ---------     --------  ----------     ----------
11101  TSP                                        1,241.398            5          A        L       101,108                                 3      A
11103  BENZENE ORGNICS                            1,201.449            5          A        L         9,594                                 3      A
11114  WINDBLN PART                               1,241.198            5          A        L         9,911                                 3      A
21101  TOTAL DUSTFALLS         XXJ-12               351.111            5          A        L         2,804                                 3      A
22306  NITRATES                                   1,241.198            5          A        L         9,911                                 3      A
22403  TSULFATES                                  2,316.449            5          A        L        18,497                                 3      A
42101  CO                                         1,243.398            5          A        L         9,929                                 3      A
42102  CO2                                        2,317.749            5          A        L        18,507                                 3      A
42401  SO2                                        1,201.398            5          A        L        68,111                                 3      A
42402  HYDROGEN SULFDE                            2,000.749            5          A        L        15,976                                 3      A
42601  NO                      J/112-A            1,201.998            5          A        L         9,598                                 3      A
42602  NO2                     S-JJJJ-55          4,300.749            5          A        L         1,236                                 3      A
42603  NOX                     J/1188A            1,201.738            5          A        L         9,596                                 3      A
43101  HC                      XXJ-12             1,351.001            5          A        L        10,788     0000100                     3      A
43102  NONMETH HC                                 1,201.448            5          A        L         9,594                                 3      A
43502  FORMALYHYDE             S-JJJ5555          4,200.749            5          A        L        33,543                                 3      A

***********
**COMMENT**       STATE      COUNTY      AQCR       GEOG           CATEGORY      CATEGORY      COMMENT                 FLAGS             BATCH
**RECORD **                                       SUBALLOC #        NUMBER       DISAG  #        TYPE      NEDS A6    EIS 1     EIS 2      CODE
***********       ----------------------------------------------------------------------------------------------------------------------
                   31         0015        011       00367             234           01            EIS          A          A         A          0

                  LINE #      COMMENTS
                  ------------------------------------------------------------------------------------------------------------------------
                   001        CATEGORY IS BROKEN INTO THREE SUBALLOCATIONS      10, 20, 30, FURTHER SUBDIVISION LATER
```

Figure AST7-8 - continued. Sample Output (Page 5 of 5)

EIS/AS Test 8

Submit Annual Report in EIS/AS Format

In this test run, EIS/AS master file internal transactions are generated from the EIS/AS master file in order to submit the data that has been added, changed, or deleted since the last execution of CRPASNA (EC0120) to the appropriate agency. The cataloged procedure ECRPM10 is used to execute CRPASNA (EC0120), the annual report program.

In Test 6, CRPASNA (EC0120) was used to submit an annual report to NEDS by generating NEDS transactions. In this test EIS/AS internal transactions are generated by the annual report program. This is accomplished by specifying AREA on the option card. For a description of CRPASNA (EC0120) refer to Test 6.

The run stream for this test run contains the JCL needed for submitting EIS/AS master file data to the appropriate agency by generating EIS/AS internal transactions. This run stream is shown in Figure AST8-1.

The cataloged procedure executed by this run stream is ECRPM10. By using substitutable parameters, the input master file is specified as ECMSTR5 (created in Test 7), the output master file is named ECMSTR6, and the output EIS/AS internal transaction file is named ECAREA1. The user must supply the DD (data definition) information for the option card file in the REPORT step. The options specified in this test run are AREA, NOFLAGW, and NOLIST. Note that when EIS/AS internal transactions are being generated the NEDS transaction file ECSNDTR _must_ be a dummy file in the REPORT step. The sample output produced by this run stream is shown in Figure PST8-2.

```
//ASTESTOR JOB    (ACCOUNTING INFO)
//*
//*   SUBMTT ANNUAL REPORT TO NEDS USING ETS/AS
//*   INTERNAL TRANSACTIONS
//*
//TESTOBA EXEC ECRPM10,
//       OLDMSTR=ECMSTR5,
//       NEWMSTR=ECMSTR6,
//       TRANFL2=ECAREA1
//*
//*   GENERATE ETS/AS INTERNAL TRANSACTIONS FOR ANNUAL REPORT
//*
//REPORT.ECSNDTR DD DUMMY
//REPORT.OPITONS DD *
AREA NOFLAGW NOLIST
```

Figure AST8-1. Run Stream

```
                                   EIS/AS ANNUAL REPORT PROGRAM  -  DIAGNOSTIC REPORT                                PAGE     1

          PROGRAM NAME: CRPASNA (EC0120)
          REVISION LEVEL: 1-00
          LAST UPDATE #: A-1
          DATE INCORPORATED: FEBRUARY 1, 1980


          OPTIONS IN EFFECT: AREA, NOFLAGW, NOLIST


          INPUT EIS/AS MASTER FILE COUNT:                     371
          OUTPUT EIS/AS MASTER FILE COUNT:                    371
          RECORDS DELETED FROM MASTER FILE:                     0
          AREA TRANSACTIONS GENERATED:                      3,076
             ADD TRANSACTIONS COUNT:                        3,076
             CHANGE TRANSACTIONS COUNT:                         0
             DELETE TRANSACTIONS COUNT:                         0
          NUMBER OF ERROR MESSAGES:                             0
          NUMBER OF WARNING MESSAGES:                           0
          NUMBER OF CONDITIONAL MESSAGES:                       0
          NUMBER OF ABORT MESSAGES:                             0
          NUMBER OF DISASTER MESSAGES:                          0
```

Figure AST8-2. Sample Output

EIS/AS Test 9

Generate Internal Transactions and Update the Master File

In this test run, the EIS/AS master file is used to generate internal transactions; each transaction will contain the emission factor file information that corresponds to it. These transactions are then used to update the master file. The cataloged procedure that achieves this is ECFMM30 which executes CMSEFGN (EC0080), the master file emission factor transaction generator program; CSRINTR (EC0050), the master file internal transaction sort program; and CFMMSTR (EC0070), the master file maintenance program.

CMSEFGN (EC0080) compares the EIS/AS master file to the EIS/AS emission factor file and creates internal transactions to update the emission factor information in the master file with data from the emission factor file.

If a matching emission factor file record is found for a master file category record, the dates of the emission factor file record are compared to the date specified on the option card. If the date of the emission factor file category record is greater than that specified by the user for category records, a category-2 internal transaction is generated to change the nitrogen, sulfur, and ash contents in the master file record. The emission factor file pollutant records for each pollutant ID in the master file record are then examined. If the date in the pollutant record is greater than that specified by the user for pollutant records, a category-5 internal transaction is generated to change the emission factor, confidence level, and specific data for the pollutant ID. Only category-2 and category-5 change transactions are generated. Note that these transactions are in master file internal transaction format.

An option card is used to specify date criteria for the emission factor file and to specify whether or not warning messages should be printed.

The date criteria specify a category date and a pollutant date. A category date must be specified for any category-2 internal transactions to be generated; likewise, a pollutant date must be specified for any category-5 internal transactions to be generated. Also, the date of an emission factor file category record must be greater than the specified category date for a category-2 transaction to be created, and the date of an emission factor file pollutant record must be greater than the specified pollutant date for a category-5 transaction to be created. A category date is specified by coding CDAT YYDDD in card columns 13 through 22, where YYDDD represents a five-digit Julian date. Also, a pollutant date is specified by coding PDAT YYDDD in card columns 28 through 37, where YYDDD represents a five-digit Julian date. Either type, or both types can be specified; however, at least one type must be specified. If no date is specified, or if a date is specified incorrectly, program execution will be terminated.

If FLAGW is coded in card columns 1 through 5, all warning messages will be printed in the diagnostic report; if NOFLAGW is coded in columns 1 through 7, no warning messages will be printed. If this field is left blank or improperly coded, a default of NOFLAGW is assumed.

The programs CSRINTR (EC0050) and CFMMSTR (EC0070) have been described in Test 2.

The run stream for this test run contains the JCL needed for generating from the master file internal transactions with new emission factor information and then using these transactions to update the master file. This run stream is shown in Figure AST9-1.

The cataloged procedure executed by this run stream is ECFMM30. Substitutable parameters are used to specify ECMSTR6 (created in Test 8) as the input master file, ECEMFL1 (created in Test 1) as the input emission factor file, and ECMSTR7 as the updated master file. The user must supply the DD (data definition) information for the option card files in the GENER and UPDATE steps. The options used in the GENER step of this test are FLAGW, CDAT 75001, and PDAT 75001. In the UDPATE step the options used are 80, FLAGW, and LIST. Refer to Figure AST9-2 for the sample output produced by this run stream.

```
//ASTES109 JOB    (ACCOUNTING INFO)
//*
//*   GENERATE INTERNAL EMISSION FACTOR TRANSACTIONS AND
//*   UDPATE THE MASTER FILE
//*
//TES109A EXEC ECFMM30,
//       EMFCFIL=ECFMFL1,
//     . OLDMSTR=ECMSTR6,
//       NEWMSTR=ECMSTR7
//*
//*   CREATE INTERNAL TRANSACTIONS FROM THE TEST 8
//*   MASTER FILE;  INSERT NEW EMISSION FACTOR FILE
//*   INFORMATION INTO THE TRANSACTIONS;  UPDATE
//*   THE MASTER FILE WITH THESE TRANSACTIONS
//*
//GENER.OPTIONS DD *
FLAGW       CDAT 75001      PDAT 75001
//UPDATE.OPTIONS DD *
NO FLAGW LIST
```

Figure AST9-1. Run Stream

```
                                   MASTER FILE EMISSION FACTOR TRANSACTION GENERATOR PROGRAM                              PAGE    1


PROGRAM NAME: CMSEFGN (EC0080)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980



OPTIONS IN EFFECT:  FLAGW        CDAT 75001      PDAT 75001



                                                DATE: CATEGORY 75/001  POLLUTANT 75/001



       *** CMSEFGN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64

RECORD KEY:  061280   000000001001000
       *** CMSEFGN 019 WARNING - NO NITROGEN, SULFUR, OR ASH CONTENTS FOR THIS KEY

RECORD KEY:  061280   000000001001000     POLLUTANT ID:  11101
       *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID

RECORD KEY:  061280   000000001001000     POLLUTANT ID:  42101
       *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID

RECORD KEY:  061280   000000001001000     POLLUTANT ID:  42401
       *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID

RECORD KEY:  061280   000000001001000     POLLUTANT ID:  42602
       *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID

RECORD KEY:  061280   000000001001000     POLLUTANT ID:  43101
       *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID
```

Figure AST9-2. Sample Output (Page 1 of 6)

```
                 MASTER FILE EMISSION FACTOR TRANSACTION GENERATOR PROGRAM                         PAGE 10

                              DATE: CATEGORY 75/001  POLLUTANT 75/001

NUMBER OF MASTER FILE RECORDS READ:                 371
NUMBER OF EMISSION FACTOR RECORDS READ:             662
NUMBER OF CATEGORY-2 TRANSACTIONS CREATED:            0
NUMBER OF CATEGORY-5 TRANSACTIONS CREATED:        1,136

NUMBER OF WARNING MESSAGES:                       1,034
NUMBER OF CONDITIONAL MESSAGES:                       1
NUMBER OF ERROR MESSAGES:                             0
NUMBER OF ABORT MESSAGES:                             0
NUMBER OF DISASTER MESSAGES:                          0
```

Figure AST9-2 - continued. Sample Output (Page 2 of 6)

```
                    ETS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                 PAGE     1

PROGRAM NAME: CSPINTR (EC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                                1,136
NUMBER OF TRANSACTIONS WRITTEN:                                   1,137



----------------------------------------------------------------------------------------------------


                       ETS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                 PAGE     1
PROGRAM NAME: CFMMSTR (EC0070)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

   CONTROL DATE IS 80    ,  ERROR OPTION IS FLAGW  ,  LIST OPTION IS LIST



----------------------------------------------------------------------------------------------------



                       ETS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                 PAGE     2
     NUMBER OF INPUT TRANSACTIONS READ:                           1,137
     NUMBER OF DISASTERS DETECTED:                                    0
     NUMBER OF ABORTS DETECTED:                                       0
     NUMBER OF ERRORS DETECTED:                                       0
     NUMBER OF CONDITIONALS DETECTED:                                 0
     NUMBER OF WARNINGS DETECTED:                                     0
     NUMBER OF TRANSACTIONS REJECTED:                                 0
     NUMBER OF AREA SOURCE FILE RECORDS READ IN:                    371
     NUMBER OF AREA SOURCE FILE RECORDS WRITTEN OUT:                371
```

Figure AST9-2 - continued. Sample Output (Page 3 of 6)

BEST DOCUMENT AVAILABLE

142

```
            FIS/AS MASTER FILE MAINTENANCE PROGRAM  -  INTERNAL TRANSACTION LISTING                        PAGE     1

0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
062238   0000002300100052CA   1110100000080000F                                SUSPENDED PART.
062238   0000002300100052CA   4210100000080000F                                SUSPENDED PART.
062238   0000002300100052CA   4240100000025000F                                SULFUR DIOXIDE
062238   0000002300100052CA   4260200000030000F                                   N  OXIDES
062238   0000004700100052CA   1110100000000200F                                SUSPENDED PART.
062238   0000004700100052CA   4210100000000200F                                SUSPENDED PART.
062238   0000004700100052CA   4240100000000100F                                SULFUR DIOXIDE
062238   0000004700100052CA   4260200000000280F                                   N  OXIDES
062238   0000006000100052CA   1110100000170000F                                SUSPENDED PART.
062238   0000006000100052CA   4210100000170000F                                SUSPENDED PART.
062238   0000006000100052CA   4240100000001500F                                SULFUR DIOXIDE
062238   0000006000100052CA   4260200000040000F                                   N  OXIDES
147840   0000000100100052CA   1110100000100000F                                SUSPENDED PART.
147840   0000000100100052CA   4210100000100000F                                SUSPENDED PART.
147840   0000000100100052CA   4240100000380000F                                SULFER DIOXIDES
147840   0000000100100052CA   4260200000030000F                                   N  OXIDES
147840   0000000200100052CA   1110100000200000F                                SUSPENDED PART.
147840   0000000200100052CA   4210100000200000F                                SUSPENDED PART.
147840   0000000200100052CA   4240100000380000F                                SULFER DIOXIDE
147840   0000000200100052CA   4260200000030000F                                   N  OXIDES
147840   0000000300100052CA   1110100000025000F                                SUSPENDED PART.
147840   0000000300100052CA   4210100000025000F                                SUSPENDED PART.
147840   0000000300100052CA   4240100001440000F                                SULFUR DIOXIDE
147840   0000000300100052CA   4260200000180000F                                   N  OXIDES
147840   0000000500100052CA   1110100000100000F                                SUSPENDED PART.
147840   0000000500100052CA   4210100000100000F                                SUSPENDED PART.
147840   0000000500100052CA   4240100000006000F                                SULFUR DIOXIDE
147840   0000000500100052CA   4260200000080000F                                   N  OXIDES
147840   0000000800100052CA   1110100000058000F                                SUSPENDED PART.
147840   0000000800100052CA   4210100000058000F                                SUSPENDED PART.
147840   0000000800100052CA   4240100000380000F                                 SULFUR DIOXIDE
147840   0000000800100052CA   4260200000091500F                                   N  OXIDES
147840   0000000900100052CA   1110100000020000F                                SUSPENDED PART.
147840   0000000900100052CA   4210100000020000F                                SUSPENDED PART.
147840   0000000900100052CA   4240100001440000F                                SULFUR DIOXIDE
147840   0000000900100052CA   4260200000270000F                                   N  OXIDES
147840   0000001000100052CA   1110100000169000F                                SUSPENDED PART.
147840   0000001000100052CA   4210100000169000F                                SUSPENDED PART.
147840   0000001000100052CA   4240100000159000F                                SULFUR DIOXIDE
147840   0000001000100052CA   4260200000060000F                                   N  OXIDES
147840   0000001100100052CA   1110100000100000F                                SUSPENDED PART.
147840   0000001100100052CA   4210100000100000F                                SUSPENDED PART.
147840   0000001100100052CA   4240100000006000F                                SULFUR DIOXIDE
147840   0000001100100052CA   4260200000120000F                                   N  OXIDES
147840   0000001400100052CA   1110100000052000F                                SUSPENDED PART.
147840   0000001400100052CA   4210100000052000F                                SUSPENDED PART.
```

Figure AST9-2 - continued. Sample Output

(Page 4 of 6)

```
                      EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  OLD MASTER FILE LISTING                      PAGE     1
061280   0000000000000000565067CG
061280   0000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                     Y080809080809080809080809
061280   0000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                     Y080809080809080809080809
061280   0000000030010000734067CARESIDENT DISTILLATE OIL  79000009750                     Y080809080809080809080809
061280   0000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                     Y080809080809080809080809
061280   0000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                     Y080809080809080809080809
061280   0000000060010000734067CARESIDENTIAL WOOD         79000000050                     Y080809080809080809080809
061280   0000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                     Y080809080809080809080809
061280   0000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                     Y080809080809080809080809
061280   0000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                     Y080809080809080809080809
061280   0000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                     Y080809080809080809080809
061280   0000000110010000669067CACOMM-INST NATURAL GAS    79000008750                     Y080809080809080809080809
061280   0000000120010000734067CACOMM-INST WOOD           79000000005                     Y080809080809080809080809
061280   0000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000098750                     Y080809080809080809080809
061280   0000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                     Y080809080809080809080809
061280   0000000150010000734067CAINDUSTRIAL COKE          79000009850                     Y080809080809080809080809
061280   0000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                     Y080809080809080809080809
061280   0000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                     Y080809080809080809080809
061280   0000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                     Y080809080809080809080809
061280   0000000190010000669067CAINDUSTRIAL WOOD          79000000025                     Y080809080809080809080809
061280   0000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                     Y080809080809080809080809
061280   0000099900010000799   CA
061280   0000010000000000453067SG79
061280   0000010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0000010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0000010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0000010019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0000019990010000474   CA
061280   0005000000000000453067SG
061280   0005000010110000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280   0005000012210000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0005000017010000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280   0005009990010000344   CA
061280   0006110000000000453067SG79
061280   0006119990010000344   CA
061280   0999900000000000453067SG79
061280   0999900019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0999999990010000344   CA
062238   0000000000000000453067CG79
062238   0000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
062238   0000000230010000669067CACOMM-INST ON-SITE INCINER79000002350                     Y080809080809080809080809
062238   0000000470010000604067CACIVIL AIRCRAFT LTO"S     79000005005                     Y080809080809080809080809
062238   0000000600010000669067CAFOREST WILD FIRES        79         0000900              Y080809080809080809080809
062238   0000009990010000669   CA
147840   0000000006000000565074CG600040134213SMITH COUNTY        INDUSTRY            1120768223
147840   0000000000020000136074 NWABASH
147840   0000000010010000604074CARESIDENT ANTHRACITE COAL   000000001
```

Figure AST9-2 - continued. Sample Output

(Page 5 of 6)

```
                 EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  NEW MASTER FILE LISTING                    PAGE      1

061280    0000000000000000565067CG
061280    0000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                     Y080809080809080809080809
061280    0000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                     Y080809080809080809080809
061280    0000000030010000734067CARESIDENT DISTILLATE OIL  79000009750                     Y080809080809080809080809
061280    0000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                     Y080809080809080809080809
061280    0000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                     Y080809080809080809080809
061280    0000000060010000734067CARESIDENTIAL WOOD         79000000050                     Y080809080809080809080809
061280    0000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                     Y080809080809080809080809
061280    0000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                     Y080809080809080809080809
061280    0000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                     Y080809080809080809080809
061280    0000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                     Y080809080809080809080809
061280    0000000110010000669067CACOMM-INST NATURAL GAS    79000008750                     Y080809080809080809080809
061280    0000000120010000734067CACOMM-INST WOOD           79000000005                     Y080809080809080809080809
061280    0000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000098750                     Y080809080809080809080809
061280    0000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                     Y080809080809080809080809
061280    0000000150010000734067CAINDUSTRIAL COKE          79000009650                     Y080809080809080809080809
061280    0000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                     Y080809080809080809080809
061280    0000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                     Y080809080809080809080809
061280    0000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                     Y080809080809080809080809
061280    0000000190010000669067CAINDUSTRIAL WOOD          79000000025                     Y080809080809080809080809
061280    0000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                     Y080809080809080809080809
061280    0000009990010000799    CA
061280    0000010000000000453067SG79
061280    0000010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280    0000010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280    0000010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280    0000010019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280    0000019990010000474    CA
061280    0005000000000000453067SG
061280    0005000010110000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    0005000012210000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280    0005000017010000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    0005009990010000344    CA
061280    0006110000000000453067SG79
061280    0006119990010000344    CA
061280    0999990000000000453067SG79
061280    0999990019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280    0999999990010000344    CA
062238    0000000000000000453067CG79
062238    0000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES ON CATEGORIES
062238    0000000230010000669067CACOMM-INST ON-SITE INCINER79000002350                     Y080809080809080809080809
062238    0000000470010000604067CACIVIL AIRCRAFT LTO'S     79000005005                     Y080809080809080809080809
062238    0000000600010000669067CAFOREST WILD FIRES        79          0000900             Y080809080809080809080809
062238    0000009990010000669    CA
147840    0000000000000000565074CG800040134213SMITH COUNTY         INDUSTRY            1120788225
147840    0000000000020000136074 WABASH
147840    0000000010010000604074CARESIDENT ANTHRACITE COAL   000000001
```

Figure AST9-2 - continued. Sample Output
(Page 6 of 6)

EIS/AS Test 10

Retrieve a Batched Answer File and Produce a Formatted Dump of the Answer File

In this test run, a batched retrieval is performed on the master file and the resulting answer file is sorted before a formatted dump of this file is produced in batch number sequence. To accomplish this, the cataloged procedure ECRTM10 is used first to execute the retrieval language processor program, CRTLNGP (EC0090); the COBOL compiler; and the linkage editor in order to create the generated retrieval program, CRTGENR (EC0100). Then, the cataloged procedure ECRTM20 is used to execute CRTGENR (EC0100). The advantage of using these separate procedures instead of the single retrieval cataloged procedure, ECRTM30, is that the retrieval program does not have to be regenerated from the retrieval specifications each time a new master file is to be used. Next, the cataloged procedure ECSRM10 is used to execute CSRMSTR (EC0110), the master file sort program. The final procedure used is ECRPM30 which executes CRPDUMP (EC0140), the master file formatted dump program.

The retrieval programs were described in Test 7. To produce a batched retrieval, each group of retrieval request cards must be preceded by a $$SELECT control card; the last retrieval control card should be a $$END card. The batched retrieval specification cards are used as input to CRTLNGP (EC0090). In this run, five retrievals are batched. Note that retrievals can only be batched when the retrieval requests are in the EIS/PS retrieval language.

The master file sort program, CSRMSTR (EC0110), sorts batched retrieval answer files into the sequence required for their use as input to either CRPMSTR (EC0130), the detailed report program, or CRPDUMP (EC0140), the formatted dump program. In addition, this program can be used to sort out-of-sequence master files into the standard master file sequence.

The option card for CSRMSTR (EC0110) specifies the sequence into which the master or answer file is to be sorted. By entering BATCH in card columns 1 through 5, the BATCH option can be specified to sort a batched answer file into batch number sequence. However, if STND is entered in card columns 1 through 4, the STND option is specified and the master file will be sorted into the standard master file sequence; i.e., the sequence created by the master file maintenance program, CFMMSTR (EC0070). If no option card is entered, a default of STND is assumed. If the option card is blank or if any invalid characters occur within columns 1 through 5, the run will be aborted.

An answer file produced by batched retrievals should always be sorted by CSRMSTR (EC0110) using the BATCH option to group together the records selected by each retrieval.

Test 4 provides a description of the master file formatted dump program, CRPDUMP (EC0140).

The run stream for this test run contains the JCL needed to generate a batched answer file, sort this file, and produce a formatted dump of this answer file. The run stream is shown in Figure AST10-1 and the sample output from this run stream is shown in Figure AST10-2.

First, the cataloged procedure ECRTM10 is executed. The user must supply the DD (data definition) information for the retrieval specification card file in the GENER step. In this test, the input retrieval specification cards are used to produce a batched answer file.

Next, the run stream executes the cataloged procedure ECRTM20. The input master file used is ECMSTR7 (created in Test 9) and the output answer file produced is named ECANSR1.

To sort the answer file, the cataloged procedure ECSRM10 is executed. Substitutable parameters specify the input file as ECANSR1 (created in the last step) and the sorted output file as ECANSR2. The user must supply the DD information for the option card file in the SORT step. The option specified in this test is BATCH.

The last cataloged procedure executed is ECRPM30. The master file used as input is ECANSR2. The DD information for the option card file in the DUMP step must be supplied by the user. The option card is not present in this run stream causing the default options to be in effect.

```
//ASTEST10 JOB     (ACCOUNTING INFO)
//*
//*   RETRIEVE A BATCH ANSWER FILE FROM THE MASTER FILE AND
//*   PRODUCE A FORMATTED DUMP OF THE ANSWER FILE
//*
//TEST10A EXEC ECRTR10
//*
//*   GENERATE THE RETRIEVAL LOAD MODULE USING THE
//*   BATCH SPECIFICATIONS
//*
//GENER.INPUT DD *
$$SELECT      0 1 2
COUNTY                              = '2320'                          AND
CATEGORY-NUMBER                     = '032'
$$SELECT
COUNTY                              = '1780'                          AND
CAT-POLLUTANT-ID                    = '43101'
$$SELECT
(COUNTY                             = '0015'                          OR
COUNTY                              = '0680')                         AND
PROJECTED-YEAR                      = '83'
$$SELECT
STATE                               = '06'                            AND
COUNTY                              = '2258'
$$SELECT
AQCR                                = '200'
$$END
//TEST10B EXEC ECRTR20,
//       MSTRFIL=ECMSTR7,
//       ANSRFIL=ECANSR1
//*
//*   EXECUTE THE GENERATED RETRIEVAL PROGRAM FROM
//*   STEP A ON THE MASTER FILE FROM TEST 9
//*
//TEST10C EXEC ECSRM10,
//       OLDMSTR=ECANSR1,
//       NEWMSTR=ECANSR2
//*
//*   SORT THE ANSWER FILE FROM STEP B IN BATCH ORDER
//*   IN PREPARATION FOR THE REPORT
//*
//SORT.OPTIONS DD *
BATCH
//TEST10D EXEC ECRPM30,
//       MSTRFIL=ECANSR2
//*
//*   PRODUCE A FORMATTED DUMP OF THE SORTED ANSWER
//*   FILE FROM STEP C
//*
//DUMP.OPTIONS DD *
```

Figure AST10-1. Run Stream

```
                    EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                    PAGE      1

PROGRAM NAME: CRTLNGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

INPUT (CONTROL CARDS):
$$SELECT      0 1 2
COUNTY                            = '2320'                    AND
CATEGORY-NUMBER                   = '032'
$$SELECT
COUNTY                            = '1780'                    AND
CAT-POLLUTANT-ID                  = '43101'
$$SELECT
(COUNTY                           = '0015'                    OR
COUNTY                            = '0680')                   AND
PROJECTED-YEAR                    = '83'
$$SELECT
STATE                             = '06'                      AND
COUNTY                            = '2238'
$$SELECT
AQCR                              = '200'
$$END

NUMBER OF CONTROL CARDS READ:                  16
NUMBER OF RETRIEVAL SKELETON RECORDS READ:    837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:   978
NUMBER OF CONDITIONAL MESSAGES:                 0
NUMBER OF ABORT MESSAGES:                       0
```

- -

```
                    EIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                    PAGE      1
PROGRAM NAME: CRTGENP (EC0100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF MASTER FILE RECORDS READ:       371
NUMBER OF MASTER FILE RECORDS WRITTEN:     92
NUMBER OF CONDITIONAL MESSAGES:             0
NUMBER OF ABORT MESSAGES:                   0
```

Figure AST10-2. Sample Output

(Page 1 of 3)

```
                              EIS/AS MASTER FILE SORT PROGRAM  -  DIAGNOSTIC REPORT                               PAGE      1


PROGRAM NAME: CSRMSTR (EC0110)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


SORT OPTION SPECIFIED: BATCH



NUMBER OF RECORDS READ:                92
NUMBER OF RECORDS WRITTEN:             92
NUMBER OF DIAGNOSTIC MESSAGES:          0
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
                         EIS/AS MASTER FILE FORMATTED DUMP PROGRAM  -  DIAGNOSTIC REPORT                          PAGE      1


PROGRAM NAME: CRPDUMP (EC0140)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTIONS IN EFFECT:  55 LINES PER PAGE;         0 RECORDS SKIPPED;      ALL RECORDS TO BE DUMPED


*** CRPDUMP 003 CONDITIONAL - NO VALID LINE SPECIFICATION - DEFAULT OF 55 ASSUMED
*** CRPDUMP 004 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE SKIPPED - DUMP STARTS AT FIRST RECORD
*** CRPDUMP 005 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE DUMPED - ENTIRE FILE DUMPED


NUMBER OF DESCRIPTION RECORDS DUMPED:          8
NUMBER OF CATEGORY RECORDS DUMPED:            82
NUMBER OF COMMENT RECORDS DUMPED:              2
TOTAL NUMBER OF RECORDS READ:                 92
```

Figure AST10-2 - continued. Sample Output (Page 2 of 3)

```
                                          EIS/AS MASTER FILE FORMATTED DUMP                                          PAGE     1

     STATE=42   COUNTY=2320   GEOGR/SUBALLOC/#=00000   CATEGRY/#=000   DISAGGR/#=00   RECORD/TYPE/(KEY)=0   LINE/#=000   BATCH=0
AQCR=204 RC/TYP=CG YR=75 DY=     AIR/BSIN=     SMSA=     AREA=                 MJ/ACT=                       PLT/ID=      BSE/YR=  PRJD/YR=
RURL/POP/%=   POPUL=            AQCR/NM=                          SUBAL/TECHNQ/CD=   SUBAL/TECHNQ/DESC=                      DEFND/AREA/CD=
SULFUR/CONTENTS: (ANTHRACT/COAL=  ,BITUMNS/COAL=10,DISTILLT/OIL=02,RESID/OIL=18)  ASH/CONTENTS: (ANTHRACT/COAL=   ,BITUMNS/COAL=091)
#/UTM/COORDS=0      1ST: (ZONE=  ,HORIZ=     ,VERT=       )   2ND: (ZONE=  ,HORIZ=     ,VERT=       )   3RD: (ZONE=  ,HORIZ=     ,VERT=       )
                    4TH: (ZONE=  ,HORIZ=     ,VERT=       )   5TH: (ZONE=  ,HORIZ=     ,VERT=       )   6TH: (ZONE=  ,HORIZ=     ,VERT=       )
SOURCE/TYPE=   LENGTH/AREA=           LENGTH/AREA/UNITS/CODE=       SIP/ESTIMATES:  (TSP=01600, SO2=0400, NOX=8400, HC=10400, CO=53200)
POP/CODE=1  VEH: (GAS/LGT=0016085 GAS/HEV=000466 DIESL/HEV=001935)  MVMILES/RDS: (LIM/ACCS=         RUR=          SUB=          URB=         )
NEDS/A1/FLG= S EIS/FLGS: (CARD/1=S,CARD/2=S,CARD/3=S,CARD/4=S,CARD/5=S,CARD/6=S)  #/POLL=05
** POLL/ID      POLL/NAME     ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7   ** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7  **
**  11101   PARTICULATES            U                      S          **  42602   NITROGEN OXIDES         U                       S           **
**  42101                           U                      S          **  42401   SULFUR DIOXIDE          U                       S           **
**  43101   HYDROCARBONS            U                      S          **                                                                      **

-------------------------------------------------------------------------------------------------------------------------------------------

     STATE=42   COUNTY=2320   GEOGR/SUBALLOC/#=00000   CATEGRY/#=032   DISAGGR/#=00   RECORD/TYPE/(KEY)=1   LINE/#=000   BATCH=0
AQCR=204  REC/TYPE=CA  CATEGRY/DESC=MED DUTY GAS VEH RURAL RD  YR/OF/INFO=     PRCSS/RATE=              CATEGRY/ADJ=            UNITS/CD=
UNITS/CD/DESC=                 UNIFRM/THRUPT=   MNTHLY/THRUPT/%: (JAN=  ,FEB=  ,MAR=  ,APR=  ,MAY=  ,JUN=  ,JUL=  ,AUG=  ,SEP=  ,OCT=
NOV=  ,DEC=  )  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=      THRUPT/RATIO=        MAX/HRLY/THRUPT=               DATA/CONFIDENCE/RATNG=
NITRG/%=        SULF/%=      ASH/%=        HEAT/CONT=          UNIFRM/HRLY/THRUPT=     HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=                                    INFO/SOURCE/CODE=
INFO/SRCE/MARK=                         EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=05
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS     POLL/NAME      EIS/FLG/5 EMTS/EST CONF/RTNG MX/HRLY/EMS
11101    0000001363      0                  F                                  SUSPENDED PART.      C        0000033       0
42101    0000001363      0                  F                                  SUSPENDED PART.      C        0000033       0
42401    0000000180      0                  F                                  SULFUR DIOXIDE       C        0000004       0
42602    0000004390      0                  F                                    N  OXIDES          C        0000107       0
43101                                       F         0040630SUS               HYDROCARBONS         S        0000000       0

-------------------------------------------------------------------------------------------------------------------------------------------

     STATE=42   COUNTY=1780   GEOGR/SUBALLOC/#=00000   CATEGRY/#=000   DISAGGR/#=00   RECORD/TYPE/(KEY)=0   LINE/#=000   BATCH=1
AQCR=200 RC/TYP=CG YR=75 DY=     AIR/BSIN=     SMSA=     AREA=                 MJ/ACT=                       PLT/ID=      BSE/YR=  PRJD/YR=
RURL/POP/%=   POPUL=            AQCR/NM=                          SUBAL/TECHNQ/CD=   SUBAL/TECHNQ/DESC=                      DEFND/AREA/CD=
SULFUR/CONTENTS: (ANTHRACT/COAL=  ,BITUMNS/COAL=10,DISTILLT/OIL=02,RESID/OIL=18)  ASH/CONTENTS: (ANTHRACT/COAL=   ,BITUMNS/COAL=091)
#/UTM/COORDS=0      1ST: (ZONE=  ,HORIZ=     ,VERT=       )   2ND: (ZONE=  ,HORIZ=     ,VERT=       )   3RD: (ZONE=  ,HORIZ=     ,VERT=       )
                    4TH: (ZONE=  ,HORIZ=     ,VERT=       )   5TH: (ZONE=  ,HORIZ=     ,VERT=       )   6TH: (ZONE=  ,HORIZ=     ,VERT=       )
SOURCE/TYPE=   LENGTH/AREA=           LENGTH/AREA/UNITS/CODE=       SIP/ESTIMATES:  (TSP=01100, SO2=0500, NOX=9200, HC=11100, CO=57300)
POP/CODE=3  VEH: (GAS/LGT=0018037 GAS/HEV=000525 DIESL/HEV=001703)  MVMILES/RDS: (LIM/ACCS=         RUR=          SUB=          URB=         )
NEDS/A1/FLG= S EIS/FLGS: (CARD/1=S,CARD/2=S,CARD/3=S,CARD/4=S,CARD/5=S,CARD/6=S)  #/POLL=05
** POLL/ID      POLL/NAME     ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7   ** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7  **
**  42401   SULFUR DIOXIDE          U                      S          **  43101   HYDROCARBONS            U                       S           **
**  42101                           U                      S          **  11101   PARTICULATES            U                       S           **
**  42602   NITROGEN OXIDES         U                      S          **                                                                      **
```

Figure AST10-2 - continued. Sample Output (Page 3 of 3)

EIS/AS Test 11 - Ad Hoc

Generate All Non-Abortive Error Messages of the Emission Factor File Edit-Maintenance Program

In this test run, all non-abortive error messages of CEMEFAC (EC0020) are generated using the cataloged procedure ECEME10 which executes CSREFTR (EC0010), the emission factor file transaction sort program; and CEMEFAC (EC0020), the emission factor file edit-maintenance program.

Specially coded emission factor transactions are used to generate the error messages of CEMEFAC (EC0020). These transactions are sorted by CSREFTR (EC0010) into the sequence required by CEMEFAC (EC0020). See Test 1 for a discussion of CSREFTR (EC0010) and CEMEFAC (EC0020).

The run stream for this test run contains the JCL needed to update the test emission factor file created in Test 1 with the specially coded emission factor file transactions which cause the error messages to be generated. This run stream is shown in Figure AST11-1.

Substitutable parameters are used in the run stream to supply the names of the input and output emission factor files. The names are ECEMFL1 (created in Test 1) and ECEMFL2, respectively. The DD (data definition) information for the input transactions and the option card file is supplied at the end of the run stream.

The FLAGW and LIST options are purposely specified incorrectly so that messages 3 and 4 will be generated. Since there are no warning messages contained in CEMEFAC (EC0020), the default of NOFLAGW (indicated by message 3) will not impede the purpose of this test. Error messages 1, 2, 6, 7, 9, 28, 30, and 36 are not generated since they are abortive in nature. Sample output produced by this run stream is shown in Figure AST11-2.

```
//ASTES111 JOB   (ACCOUNTING INFO)
//*
//*   GENERATE ALL NON-ABORTIVE ERROR MESSAGES OF THE
//*   EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM
//*
//TEST111A EXEC ECEML10,
//       OLDEMFC=FCEMFL1,
//       NEWEMFC=FCEMFL2
//*
//*   EDIT TRANSACTIONS WHICH HAVE BEEN SPECIALLY
//*   CODED TO GENERATE THE ERROR MESSAGES OF
//*   CEMEFAC (EC00020)
//*
//SORT.INPUT DD *
STCNTYSURAICATDI        YYDDD                                                 2D
000000000001110004#POL1D66123EMISSFACTRC                                      3A
0612800000000300F       79297                                                 1A
1122223333344455        66123   111222335                                     4B
1122223333344455        66123   111222333                                     1A
1122223333344455        66123   NITSULASH                                     1A
4455556666688822        66222                                                 2A
4455556666688622F 9999966222                                                  3A
5566667777711122        77123                                                 1D
5566667777711122        77123                                                 1A
5566667777711122        77123                                                 1A
5566667777711133        77123                                                 1C
//UPDATE.OPTIONS DD *
R0005 FLAGG LAST
```

Figure AST11-1. Run Stream

```
                 EIS/AS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: CSREFTR (EC0010)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF INPUT TRANSACTIONS:                                 12
NUMBER OF OUTPUT TRANSACTIONS:                                13
```

Figure AST11-2. Sample Output

(Page 1 of 3)

```
                    EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                      PAGE     1

PROGRAM NAME: CEMEFAC (EC0020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTION CARD

80005 FLAGG LAST
                               *** CEMEFAC 003 CONDITIONAL - FLAGW OPTION INVALID, USED DEFAULT OF NOFLAGW

80005 FLAGG LAST
                               *** CEMEFAC 004 CONDITIONAL - LIST OPTION INVALID, USED DEFAULT OF NOLIST

   CONTROL DATE IS 80005,  ERROR OPTION IS NOFLAGW,  LIST OPTION IS NOLIST



STCNTYSUBALCATDI       YYDDD                                                2D
                               *** CEMEFAC 034 ERROR - ACTION CODE INCOMPATIBLE WITH CARD TYPE - CARD REJECTED
                               *** CEMEFAC 005 ERROR - COLUMN 1, STATE INVALID - CARD REJECTED
                               *** CEMEFAC 008 ERROR - COLUMN 3, COUNTY NOT NUMERIC - CARD REJECTED
                               *** CEMEFAC 010 ERROR - COLUMN 7, SUBALLOCATION NOT NUMERIC - CARD REJECTED
                               *** CEMEFAC 011 ERROR - COLUMN 12, CATEGORY NOT NUMERIC - CARD REJECTED
                               *** CEMEFAC 023 ERROR - COLUMN 15, DISAGGREGATION NOT NUMERIC - CARD REJECTED
                               *** CEMEFAC 012 ERROR - COLUMN 24, EIS/AS DATE INVALID - CARD REJECTED

00000000000111004*POLID66123EMISSFACTRC                                     3A
                               *** CEMEFAC 024 ERROR - COLUMN 17, EF ORIGIN INVALID - CARD REJECTED
                               *** CEMEFAC 037 ERROR - COLUMN 17, EF ORIGIN MUST BE F FOR NEDS CATEGORY - CARD REJECTED
                               *** CEMEFAC 031 ERROR - COLUMN 18, INVALID EF SOURCE TYPE  -CARD REJECTED
                               *** CEMEFAC 019 ERROR - COLUMN 19, POLLUTANT ID  INVALID - CARD REJECTED
                               *** CEMEFAC 013 ERROR - COLUMN 29, EMISSION FACTOR NOT NUMERIC -  CARD REJECTED
                               *** CEMEFAC 032 ERROR - COLUMN 39, EF CONFIDENCE LEVEL INVALID - CARD REJECTED

0612600000000300F      79297                                                1A
                               *** CEMEFAC 020 ERROR - ADD SPECIFIED FOR EXISTING EIS/AS EMF RECORD - CARD REJECTED

1122223333344455       66123   111222333                                    4B
                               *** CEMEFAC 017 ERROR - COLUMN 79, CARD TYPE INVALID - CARD REJECTED
                               *** CEMEFAC 018 ERROR - COLUMN 80, ACTION CODE INVALID - CARD REJECTED

1122223333344455       66123   111222333                                    1A
                               *** CEMEFAC 027 ERROR - NITROGEN FLAG MUST BE N TO HAVE NITROGEN CONTENT - CARD REJECTED
                               *** CEMEFAC 025 ERROR - ASH FLAG MUST BE A TO HAVE ASH CONTENT PRESENT - CARD REJECTED
```

Figure AST11-2 - continued. Sample Output
(Page 2 of 3)

```
                    EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                    PAGE      2

                        *** CEMEFAC 026 ERROR - SULFUR FLAG MUST BE S TO HAVE SULFUR CONTENT - CARD REJECTED

1122223333344455        66123   NITSULASH                                 1A
                        *** CEMEFAC 016 ERROR - COLUMN 32, NITROGEN CONTENT NOT NUMERIC - CARD REJECTED
                        *** CEMEFAC 014 ERROR - COLUMN 38, ASH CONTENT NOT NUMERIC - CARD REJECTED
                        *** CEMEFAC 015 ERROR - COLUMN 35, SULFUR CONTENT NOT NUMERIC - CARD REJECTED

0455556666688822        66222                                             2A
                        *** CEMEFAC 035 ERROR - TYPE-2 ADD SPECIFIED FOR NONEXISTENT CATEGORY - CARD REJECTED

0455556666688822F 9999966222                                              3A
                        *** CEMEFAC 033 ERROR - ADD OF POLLUTANT SPECIFIED FOR NONEXISTENT CATEGORY - CARD REJECTED

5566667777711122        77123                                             1D
                        *** CEMEFAC 022 ERROR - DELETE SPECIFIED FOR NONEXISTENT EIS/AS EMF RECORD - CARD REJECTED

5566667777711122        77123                                             1A
                        *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

5566667777711133        77123                                             1C
                        *** CEMEFAC 021 ERROR - CHANGE SPECIFIED FOR NONEXISTENT EIS/AS EMF RECORD - CARD REJECTED


NUMBER OF TRANSACTIONS READ:                                    13
NUMBER OF ERRORS DETECTED:                                      24
NUMBER OF WARNINGS DETECTED:                                     0
NUMBER OF TRANSACTIONS REJECTED:                                11
NUMBER OF EMISSION FACTOR FILE RECORDS READ:                   682
NUMBER OF EMISSION FACTOR FILE RECORDS WRITTEN:                683

PROGRAM NAME: CEMEFAC (EC0020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

Figure AST11-2 - continued. Sample Output (Page 3 of 3)

EIS/AS Test 12 - Ad Hoc

Generate All Non-Abortive Error Messages of the Master File Transaction Edit Program

In this test run, all non-abortive error messages of CEDMSTR (EC0040) are generated using the cataloged procedure ECEDT10 which executes CEDMSTR (EC0040), the master file transaction edit program.

Specially coded master file transactions are used to generate the error messages of CEDMSTR (EC0040). See EIS/AS Test 3 for a discussion of CEDMSTR (EC0040).

The run stream for this test run contains the JCL needed to edit master file transactions and create a file containing master file internal transactions. The specially coded master file transactions are also contained in the run stream which is shown in Figure AST12-1.

A substitutable parameter is used to supply a name for the internal transaction file output from CEDMSTR (EC0040). The name of this file is ECINTR3. The DD (data definition) information for the input transaction file and the option card file is also supplied in the run stream.

The LIST option is misspelled on the option card in order to generate message 4 which indicates that a default of NOLIST is assumed by the program. The FLAGW option is specified so that the warning messages will not be suppressed, therefore, message 3 (which indicates a default of NOFLAGW) will not be generated in this test. Error messages 1, 2, and 144 are not generated since they are abortive in nature. Sample output produced by this run stream is shown in Figure AST12-2.

```
//ASTEST12 JOB     (ACCOUNTING INFO)
//*
//*   GENERATE ALL NON-ABORTIVE ERROR MESSAGES OF THE MASTER FILE
//*   TRANSACTION EDIT PROGRAM
/*
//TEST12A EXEC ECEDIT10,
//        INTRTRN=ECINTR3
//*
//*   EDIT MASTER FILE TRANSACTIONS SPECIALLY CODED
//*   TO GENERATE THE ERROR MESSAGES OF CEDMSIP (EC0040)
//*
//EDIT.INPUT DD *
STCNTYABC                                                                   CA6
112222123SUBAL NON-BLANK FIELDS                                            CG1D
11000022200111YYDDDBSNSMSA                                           YRPYPPCG1C
11000012300000POPULATN                                                     SG2C
11000012300000ST                 DACSASBSDSRAACABCZ1HRZ1VERT1Z2HRZ2VERT2 CG3C
11000012300000Z3HRZ3VERT3Z4HRZ4VERT4Z5HRZ5VERT5Z6HRZ6VERT6SLNGTHARUC       CG4C
11000012300000TSPESS02FNOXFHCESTCUFST                                      CG5C
11000012300000 PLVFHGASHVYGASHVYDSLLIMACCRURALRSUBURBURBANRD               CG6C
11000012300000PLID1             *        PLID2              *              CG7C
1100001230000011101 NON-BLANK FIELDS     43101 NON-BLANK FIELDS            CG7D
110000123                                                                   NOA
110000123 NON-BLANK FIELDS                                                  NOD
11000012300000CATAG                       YRPROCESSRTCATEGADUC             CA1C
1100001230000011100MTHRUPUT PERCENTAGES     25853RT1OHRLYTHRPUT NITSUASH   CA2A
1100001230000011100                                                        CA2A
1100001230000011100HTHRUPUT PERCENTAGES                                    CA3A
1100001230000011100                                                        CA3A
1100001230000011100POLIDEMISSFACTR O#          A7EMISS                     CA5A
110000123000001110043101          A                                        CA5A
110000123000001110043101          B                                        CA5C
110000123000001110011101 NON-BLANK FIELDS                                  CA5D
11000012300000111AGLIN NON-BLANK FIELDS                                     R2D
1100001230000085                                                           CG1A
1100001230000011100 NON-BLANK FIELDS                                       CD1D
1100001230000076                   217111512512511502993861018029933529 CG3C
1100001230000019020032000120150390002001004000011005030000                 CG0C
1100001230000011101               S         43101                S         CG7C
1100001230000011100N01MP020304050607080910MP                     C         CA2A
1100001230000011100Y                                             C         CA2C
1100001230000011100N010203HP040506070809HP01020304050607010201020304       CA3A
//EDIT.OPTIONS DD *
90 FLAGW   LOST
```

Figure AST12-1. Run Stream

```
                                       EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE      1

PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT: CONTROL YEAR 80   FLAGW     NOLIST
                                              (DEFAULT)

          *** CEDMSTR 004 CONDITIONAL - BLANK OR INVALID LIST OPTION, ASSUMING NOLIST

STCNTYAQC                                                                     CMP                                        REF:       1
BEB  EB E                                                                     BBM
          *** CEDMSTR 005 ERROR - COLUMN 80 - INVALID ACTION CODE, CARD REJECTED
          *** CEDMSTR 009 ERROR - COLUMN 01 - INVALID STATE CODE, CARD REJECTED
          *** CEDMSTR 010 ERROR - COLUMN 03 - INVALID COUNTY CODE, CARD REJECTED
          *** CEDMSTR 011 ERROR - COLUMN 07 - INVALID AQCR, CARD REJECTED
          *** CEDMSTR 006 ERROR - COLUMN 78 - INVALID, CARD REJECTED
          *** CEDMSTR 008 ERROR - COLUMN 79 - INVALID CARD NUMBER, CARD REJECTED

112222123SUBAL NON-BLANK FIELDS                                              LG1D                                        REF:       2
        B   EB                                                              EB
          *** CEDMSTR 007 ERROR - COLUMN 77 - INVALID SUBALLOCATION TYPE, CARD REJECTED
          *** CEDMSTR 012 ERROR - COLUMN 10 - INVALID SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 022 ERROR - COLUMNS 15-76 NOT BLANK FOR DESCRIPTION DELETE, CARD REJECTED

11000022200111YYDDDBSNSMSA                                             YRPYPPCG1C                                        REF:       3
              BEB EB EB  E                                             BEBEHE
          *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 015 ERROR - COLUMN 15 - INVALID YEAR OF RECORD, CARD REJECTED
          *** CEDMSTR 030 ERROR - COLUMN 17 - INVALID DAY, REPLACING SPACES
          *** CEDMSTR 031 ERROR - COLUMN 20 - INVALID AIR BASIN, REPLACING SPACES
          *** CEDMSTR 032 ERROR - COLUMN 23 - INVALID SMSA, REPLACING SPACES
          *** CEDMSTR 033 ERROR - COLUMN 71 - INVALID SIP BASE YEAR, REPLACING SPACES
          *** CEDMSTR 034 ERROR - COLUMN 73 - INVALID PROJECTED YEAR, REPLACING SPACES
          *** CEDMSTR 035 ERROR - COLUMN 75 - INVALID % RURAL, REPLACING SPACES

11000012300000POPULATN                                                       SG2C                                        REF:       4
              B     E
          *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 036 ERROR - COLUMN 15 - INVALID POPULATION, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

11000012300000ST                    DACSASBSDSPAACABCZ1HRZ1VERT1Z2HRZ2VERT2 CG3C                                        REF:       5
              BE                    B EBEBEBEBLB EB EBEB  EB   EBEB  EB   E
          *** CEDMSTR 037 ERROR - COLUMN 15 - INVALID SUBALLOCATION TECHNIQUE CODE, REPLACING SPACES
          *** CEDMSTR 038 ERROR - COLUMN 37 - INVALID DEFINED AREA CODE, REPLACING SPACES
          *** CEDMSTR 039 ERROR - COLUMN 40 - INVALID SULFUR-ANTHRACITE COAL, REPLACING SPACES
          *** CEDMSTR 041 ERROR - COLUMN 42 - INVALID SULFUR-BITUMINOUS COAL, REPLACING SPACES
          *** CEDMSTR 043 ERROR - COLUMN 44 - INVALID SULFUR-DISTILLATE OIL, REPLACING SPACES
          *** CEDMSTR 045 ERROR - COLUMN 46 - INVALID SULFUR-RESIDUAL OIL, REPLACING SPACES
          *** CEDMSTR 047 ERROR - COLUMN 48 - INVALID ASH-ANTHRACITE COAL, REPLACING SPACES
          *** CEDMSTR 049 ERROR - COLUMN 51 - INVALID ASH-BITUMINOUS COAL, REPLACING SPACES
          *** CEDMSTR 051 ERROR - COLUMN 54 - UTM ZONE 1 INVALID, REPLACING SPACES
          *** CEDMSTR 053 ERROR - COLUMN 56 - UTM HORIZONTAL 1 INVALID, REPLACING SPACES
```

Figure AST12-2. Sample Output

(Page 1 of 5)

```
                                        EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                          PAGE       2
          *** CEDMSTR 055 ERROR - COLUMN 60 - UTM VERTICAL 1 INVALID, REPLACING SPACES
          *** CEDMSTR 057 ERROR - COLUMN 65 - UTM ZONE 2 INVALID, REPLACING SPACES
          *** CEDMSTR 059 ERROR - COLUMN 67 - UTM HORIZONTAL 2 INVALID, REPLACING SPACES
          *** CEDMSTR 061 ERROR - COLUMN 71 - UTM VERTICAL 2 INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

11000012300000Z3HRZ3VERT3Z4HRZ4VERT4Z5HRZ5VERT5Z6HRZ6VERT6SLNGTHARDC         CG4C                                 REF:       6
              BEB  EB   EBEB  EB   EBEB  EB   EBEB  EB   EBB     EBE
          *** CEDMSTR 063 ERROR - COLUMN 15 - UTM ZONE 3 INVALID, REPLACING SPACES
          *** CEDMSTR 065 ERROR - COLUMN 17 - UTM HORIZONTAL 3 INVALID, REPLACING SPACES
          *** CEDMSTR 067 ERROR - COLUMN 21 - UTM VERTICAL 3 INVALID, REPLACING SPACES
          *** CEDMSTR 069 ERROR - COLUMN 26 - UTM ZONE 4 INVALID, REPLACING SPACES
          *** CEDMSTR 071 ERROR - COLUMN 28 - UTM HORIZONTAL 4 INVALID, REPLACING SPACES
          *** CEDMSTR 073 ERROR - COLUMN 32 - UTM VERTICAL 4 INVALID, REPLACING SPACES
          *** CEDMSTR 075 ERROR - COLUMN 37 - UTM ZONE 5 INVALID, REPLACING SPACES
          *** CEDMSTR 077 ERROR - COLUMN 39 - UTM HORIZONTAL 5 INVALID, REPLACING SPACES
          *** CEDMSTR 079 ERROR - COLUMN 43 - UTM VERTICAL 5 INVALID, REPLACING SPACES
          *** CEDMSTR 081 ERROR - COLUMN 48 - UTM ZONE 6 INVALID, REPLACING SPACES
          *** CEDMSTR 083 ERROR - COLUMN 50 - UTM HORIZONTAL 6 INVALID, REPLACING SPACES
          *** CEDMSTR 085 ERROR - COLUMN 54 - UTM VERTICAL 6 INVALID, REPLACING SPACES
          *** CEDMSTR 087 ERROR - COLUMN 59 - SOURCE TYPE INVALID, REPLACING SPACE
          *** CEDMSTR 088 ERROR - COLUMN 60 - LENGTH OF LINE-LINK-AREA INVALID, REPLACING SPACES
          *** CEDMSTR 089 ERROR - COLUMN 67 - LINE-LINK-AREA CODE INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

11000012300000TSPESSO2ENOXEHCESTCOEST                                      CG5C                                 REF:       7
              B   EB  EB  EB    EB   E
          *** CEDMSTR 090 ERROR - COLUMN 15 - SIP ESTIMATE TSP INVALID, REPLACING SPACES
          *** CEDMSTR 091 ERROR - COLUMN 20 - SIP ESTIMATE SO2 INVALID, REPLACING SPACES
          *** CEDMSTR 092 ERROR - COLUMN 24 - SIP ESTIMATE NOX INVALID, REPLACING SPACES
          *** CEDMSTR 093 ERROR - COLUMN 28 - SIP ESTIMATE HC INVALID, REPLACING SPACES
          *** CEDMSTR 094 ERROR - COLUMN 33 - SIP ESTIMATE CO INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

11000012300000 PLVEHGASHVYGASHVYDSLLIMACCRURALRSUBURBURBANRD               CG6C                                 REF:       8
               BB     EB     EB     EB     EB     EB     EB     E
          *** CEDMSTR 095 ERROR - COLUMN 16 - POPULATION CODE INVALID, REPLACING SPACE
          *** CEDMSTR 096 ERROR - COLUMN 17 - LIGHT VEHICLES-GAS INVALID, REPLACING SPACES
          *** CEDMSTR 097 ERROR - COLUMN 24 - HEAVY VEHICLES-GAS INVALID, REPLACING SPACES
          *** CEDMSTR 098 ERROR - COLUMN 30 - HEAVY VEHICLES-DIESEL INVALID, REPLACING SPACES
          *** CEDMSTR 099 ERROR - COLUMN 36 - LIMITED ACCESS ROADS INVALID, REPLACING SPACES
          *** CEDMSTR 100 ERROR - COLUMN 42 - RURAL ROADS INVALID, REPLACING SPACES
          *** CEDMSTR 101 ERROR - COLUMN 48 - SUBURBAN ROADS INVALID, REPLACING SPACES
          *** CEDMSTR 102 ERROR - COLUMN 54 - URBAN ROADS INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

11000012300000PLID1                    *         PLID2                *         CG7C                                 REF:       9
              B   E                    B         B  E                 B
          *** CEDMSTR 103 ERROR - COLUMN 15 - POLLUTANT ID 1 INVALID, POLLUTANT 1 REJECTED
          *** CEDMSTR 105 WARNING - COLUMN 35 - REPLACING ATTAINMENT STATUS 1 WITH U
          *** CEDMSTR 106 ERROR - COLUMN 43 - POLLUTANT ID 2 INVALID, POLLUTANT 2 REJECTED
          *** CEDMSTR 108 WARNING - COLUMN 63 - REPLACING ATTAINMENT STATUS 2 WITH U
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED
```

Figure AST12-2 - continued. Sample Output (Page 2 of 5)

```
                                      EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                                 PAGE      3
1100001230000011101 NON-BLANK FIELDS     43101 NON-BLANK FIELDS          CG7D                                      REF:        10
                   B                   E      B                   E
          *** CEDMSTR 023 ERROR - COLS 20-41 NOT BLANK FOR DESCRIPTION POLLUTANT DELETE, COLS 15-41 REJECTED
          *** CEDMSTR 024 ERROR - COLS 48-69 NOT BLANK FOR DESCRIPTION POLLUTANT DELETE, COLS 43-69 REJECTED
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

110000123                                                                NOA                                       REF:        11
         B                                                               E
          *** CEDMSTR 142 WARNING - COLUMN 10 - REPLACING NEDS COMMENT WITH GENERATED BY EIS/AS

110000123 NON-BLANK FIELDS                                               NOD                                       REF:        12
         B                                                               E
          *** CEDMSTR 027 ERROR - COLUMNS 10-77 NOT BLANK FOR NEDS COMMENT DELETE, CARD REJECTED

11000012300000CATAG                        YRPROCESSRTCATEGADUC          CA1C                                      REF:        13
              B E                           BEB     EB      EBE
          *** CEDMSTR 017 ERROR - COLUMN 15 - CATEGORY NUMBER INVALID, CARD REJECTED
          *** CEDMSTR 019 ERROR - AGGREGATE TRANSACTION WITH NONZERO DISAGGREGATE NUMBER, CARD REJECTED
          *** CEDMSTR 109 ERROR - COLUMN 45 - YEAR OF INFORMATION INVALID, REPLACING SPACES
          *** CEDMSTR 110 ERROR - COLUMN 47 - PROCESS RATE INVALID, REPLACING SPACES
          *** CEDMSTR 111 ERROR - COLUMN 56 - CATEGORY ADJUST INVALID, REPLACING SPACES
          *** CEDMSTR 112 ERROR - COLUMN 63 - UNITS CODE INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

1100001230000011100MTHRUPUT PERCENTAGES    25853RTIUHRLYTHRPUT NITSUASH  CA2A                                      REF:        14
                  BB                      EBEBBEB  EB        EBB EBEB E
          *** CEDMSTR 113 ERROR - COLUMN 20 - UNIFORM MONTHLY INDICATOR INVALID, REPLACING WITH Y
          *** CEDMSTR 115 ERROR - COLUMN 21 - MONTHLY THRUPUT %S WITH Y INDICATOR, REPLACING UNIFORM %S
          *** CEDMSTR 118 ERROR - COLUMN 45 - HRS/DAY INVALID, REPLACING SPACES
          *** CEDMSTR 119 ERROR - COLUMN 47 - DAYS/WK INVALID, REPLACING SPACE
          *** CEDMSTR 120 ERROR - COLUMN 48 - WKS/YR INVALID, REPLACING SPACES
          *** CEDMSTR 121 ERROR - COLUMN 50 - RATIO OF THRUPUT INVALID, REPLACING SPACES
          *** CEDMSTR 122 ERROR - COLUMN 54 - MAX HOURLY THRUPUT INVALID, REPLACING SPACES
          *** CEDMSTR 123 WARNING - COLUMN 64 - REPLACING DATA CONFIDENCE RATING WITH ZERO
          *** CEDMSTR 126 ERROR - COLUMN 65 - % NITROGEN INVALID, REPLACING SPACES
          *** CEDMSTR 127 ERROR - COLUMN 68 - % SULFUR INVALID, REPLACING SPACES
          *** CEDMSTR 128 ERROR - COLUMN 70 - % ASH INVALID, REPLACING SPACES

1100001230000011100                                                      CA2A                                      REF:        15
                  B                                          B
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y
          *** CEDMSTR 123 WARNING - COLUMN 64 - REPLACING DATA CONFIDENCE RATING WITH ZERO

1100001230000011100MTHRUPUT PERCENTAGES                                  CA3A                                      REF:        16
                  BB                                             E
          *** CEDMSTR 129 ERROR - COLUMN 20 - UNIFORM HOURLY THRUPUT INDICATOR INVALID, REPLACING WITH Y
          *** CEDMSTR 131 ERROR - COLUMN 21 - HOURLY THRUPUT %S WITH Y INDICATOR, REPLACING UNIFORM %S

1100001230000011100                                                      CA3A                                      REF:        17
                  B
          *** CEDMSTR 130 WARNING - COLUMN 20 - UNIFORM HOURLY THRUPUT INDICATOR BLANK, ASSUMING Y
```

Figure AST12-2 - continued. Sample Output

(Page 3 of 5)

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```
                              EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                                   PAGE       4
110000123000001 1100POLIDEMISSFACTR OF           A7EMISS                       CASA                                  REF:       18
             B   EB         EBBB          B     E
        *** CEDMSTR 134 ERROR - COLUMN 20 - POLLUTANT ID INVALID, CARD REJECTED
        *** CEDMSTR 135 ERROR - COLUMN 25 - EMISSION FACTOR INVALID, REPLACING SPACES
        *** CEDMSTR 136 WARNING - COLUMN 35 - REPLACING EMISSION FACTOR CONFIDENCE RATING WITH ZERO
        *** CEDMSTR 139 ERROR - COLUMN 36 - EMISSION FACTOR ORIGIN INVALID, REPLACING SPACE
        *** CEDMSTR 140 ERROR - COLUMN 37 - EMISSION FACTOR SOURCE CODE INVALID, REPLACING SPACE
        *** CEDMSTR 141 ERROR - COLUMN 48 - NEDS A7 EMISSION INVALID, REPLACING SPACES

1100001230000011110043101              A                                     CASA                                  REF:       19
                                        B
        *** CEDMSTR 137 ERROR - COLUMN 35 - EMISSION FACTOR CONFIDENCE RATING INVALID, REPLACING ZERO

1100001230000011110043101              B                                     CASC                                  REF:       20
                                        B
        *** CEDMSTR 138 ERROR - COLUMN 35 - EMISSION FACTOR CONFIDENCE RATING INVALID, REPLACING SPACE

1100001230000011110011101 NON-BLANK FIELDS                                   CASD                                  REF:       21
                   B                                                       E
        *** CEDMSTR 026 ERROR - COLUMNS 25-76 NOT BLANK FOR CATEGORY POLLUTANT DELETE, CARD REJECTED

1100001230000011AGLIN NON-BLANK FIELDS                                       R2D                                   REF:       22
             BEB EB                                                        E B
        *** CEDMSTR 018 ERROR - COLUMN 18 - DISAGGREGATE NUMBER INVALID, CARD REJECTED
        *** CEDMSTR 021 ERROR - COLUMN 20 - LINE NUMBER INVALID, CARD REJECTED
        *** CEDMSTR 028 ERROR - COLUMNS 23-77 NOT BLANK FOR EIS/AS COMMENT DELETE, CARD REJECTED
        *** CEDMSTR 029 ERROR - COLUMN 79 - INVALID CARD NUMBER FOR DELETE TRANSACTION, CARD REJECTED

1100001230000085                                                             CG1A                                  REF:       23
              BE
        *** CEDMSTR 016 ERROR - COLUMN 15 - YEAR OF RECORD GREATER THAN YEAR ON OPTION CARD, CARD REJECTED

1100001230000011100 NON-BLANK FIELDS                                         CD1D                                  REF:       24
                  B                                                        E
        *** CEDMSTR 020 ERROR - DISAGGREGATE TRANSACTION WITH ZERO DISAGGREGATE NUMBER, CARD REJECTED
        *** CEDMSTR 025 ERROR - COLUMNS 20-76 NOT BLANK FOR CATEGORY DELETE, CARD REJECTED

1100001230000078                           21711151251251150299388101802993352 9 C63C                              REF:       25
                                           BEBEBEBEB EB EBEB  EB   EBEB  EB   E
        *** CEDMSTR 040 CONDITIONAL - COLUMN 40 - SULFUR-ANTHRACITE COAL OUT OF RANGE
        *** CEDMSTR 042 CONDITIONAL - COLUMN 42 - SULFUR-BITUMINOUS COAL OUT OF RANGE
        *** CEDMSTR 044 CONDITIONAL - COLUMN 44 - SULFUR-DISTILLATE OIL OUT OF RANGE
        *** CEDMSTR 046 CONDITIONAL - COLUMN 46 - SULFUR-RESIDUAL OIL OUT OF RANGE
        *** CEDMSTR 048 CONDITIONAL - COLUMN 48 - ASH-ANTHRACITE COAL OUT OF RANGE
        *** CEDMSTR 050 CONDITIONAL - COLUMN 51 - ASH-BITUMINOUS COAL OUT OF RANGE
        *** CEDMSTR 052 CONDITIONAL - COLUMN 54 - UTM ZONE 1 OUT OF RANGE
        *** CEDMSTR 054 CONDITIONAL - COLUMN 56 - UTM HORIZONTAL 1 OUT OF RANGE
        *** CEDMSTR 056 CONDITIONAL - COLUMN 60 - UTM VERTICAL 1 OUT OF RANGE
        *** CEDMSTR 058 CONDITIONAL - COLUMN 65 - UTM ZONE 2 OUT OF RANGE
        *** CEDMSTR 060 CONDITIONAL - COLUMN 67 - UTM HORIZONTAL 2 OUT OF RANGE
        *** CEDMSTR 062 CONDITIONAL - COLUMN 71 - UTM VERTICAL 2 OUT OF RANGE
```

Figure AST12-2 - continued. Sample Output (Page 4 of 5)

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                           EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE        5

110000123000000190200320001201503900020010040000110050300OC                        CG4C                      REF:        26
              BEB  EB    EBEB  EB    EBEB  EB    EBEB  EB    E
          *** CEDMSTR 064 CONDITIONAL - COLUMN 15 - UTM ZONE 3 OUT OF RANGE
          *** CEDMSTR 066 CONDITIONAL - COLUMN 17 - UTM HORIZONTAL 3 OUT OF RANGE
          *** CEDMSTR 068 CONDITIONAL - COLUMN 21 - UTM VERTICAL 3 OUT OF RANGE
          *** CEDMSTR 070 CONDITIONAL - COLUMN 26 - UTM ZONE 4 OUT OF RANGE
          *** CEDMSTR 072 CONDITIONAL - COLUMN 28 - UTM HORIZONTAL 4 OUT OF RANGE
          *** CEDMSTR 074 CONDITIONAL - COLUMN 32 - UTM VERTICAL 4 OUT OF RANGE
          *** CEDMSTR 076 CONDITIONAL - COLUMN 37 - UTM ZONE 5 OUT OF RANGE
          *** CEDMSTR 078 CONDITIONAL - COLUMN 39 - UTM HORIZONTAL 5 OUT OF RANGE
          *** CEDMSTR 080 CONDITIONAL - COLUMN 43 - UTM VERTICAL 5 OUT OF RANGE
          *** CEDMSTR 082 CONDITIONAL - COLUMN 48 - UTM ZONE 6 OUT OF RANGE
          *** CEDMSTR 084 CONDITIONAL - COLUMN 50 - UTM HORIZONTAL 6 OUT OF RANGE
          *** CEDMSTR 086 CONDITIONAL - COLUMN 54 - UTM VERTICAL 6 OUT OF RANGE

1100001230000011101                 S        43101                S                CG7C                      REF:        27
                                    B                             B
          *** CEDMSTR 104 ERROR - COLUMN 35 - ATTAINMENT STATUS 1 INVALID, REPLACING WITH U
          *** CEDMSTR 107 ERROR - COLUMN 63 - ATTAINMENT STATUS 2 INVALID, REPLACING WITH U

110000123000001110ON01MP0203040506070809100MP                     C                CA2A                      REF:        28
                         BE                  BE                   B
          *** CEDMSTR 116 ERROR - COLUMN 23 - FEB THRUPUT % INVALID, REPLACING WITH ZERO
          *** CEDMSTR 116 ERROR - COLUMN 43 - DEC THRUPUT % INVALID, REPLACING WITH ZERO
          *** CEDMSTR 117 ERROR - SUM OF MONTHLY THRUPUT %S INVALID, REPLACING W/ UNIFORM THRUPUTS
          *** CEDMSTR 124 ERROR - COLUMN 64 - DATA CONFIDENCE RATING INVALID, REPLACING ZERO

11000012300000111O0Y                                              C                CA2C                      REF:        29
                                                                  B
          *** CEDMSTR 125 ERROR - COLUMN 64 - DATA CONFIDENCE RATING INVALID, REPLACING SPACE

110000123000001110ON010203HP040506070809HP01020304050607010201020304       CA3A                      REF:        30
                         BE            BE
          *** CEDMSTR 132 ERROR - COLUMN 27 - HOUR 03 THRUPUT % INVALID, REPLACING WITH ZERO
          *** CEDMSTR 132 ERROR - COLUMN 41 - HOUR 10 THRUPUT % INVALID, REPLACING WITH ZERO
          *** CEDMSTR 133 ERROR - SUM OF HRLY THRUPUT %S INVALID, REPLACING UNIFORM HRLY THRUPUTS

NUMBER OF INPUT TRANSACTIONS:           30
NUMBER OF VALID TRANSACTIONS:           13
NUMBER OF REJECTED TRANSACTIONS:        17
NUMBER OF TRANSACTIONS WRITTEN:         13
NUMBER OF WARNING MESSAGES:              8
NUMBER OF CONDITIONAL MESSAGES:         25
NUMBER OF ERROR MESSAGES:              117
NUMBER OF ABORT MESSAGES:                0
NUMBER OF DISASTER MESSAGES:             0

PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

Figure AST12-2 - continued. Sample Output
(Page 5 of 5)

EIS/AS Test 13 - Ad Hoc

Generate All Non-Abortive Error Messages of the NEDS to EIS/AS Master File Transaction Conversion-Edit Program

In this test run, all non-abortive error messages of CCENETR (EC0030) are generated using the cataloged procedure ECCET10 which executes CCENETR (EC0030), the NEDS to EIS/AS master file transaction conversion edit program.

Specially coded NEDS master file transactions are used to generate the error messages of CCENETR (EC0030). These transactions are input to the program in random order. See EIS/AS Test 2 for a discussion of CCENETR (EC0030).

The run stream for this test run contains the JCL needed to convert NEDS master file transactions to EIS/AS master file internal transactions. The specially coded NEDS transactions are also included in the run stream. This run stream is shown in Figure AST13-1.

A substitutable parameter is used to supply a name for the internal transaction file output from CCENETR (EC0030). The name of this file is ECINTR4. The DD (data definition) information for the input transaction file and the option card file is also supplied in the run stream.

The FLAGW and LIST options are specified incorrectly on the option card in order to generate messages 42 and 43 which indicate that defaults of NOFLAGW and NOLIST, respectively, are assumed by the program. The default of NOFLAGW will not impede the purpose of this test since there are no warning messages issued by CCENETR (EC0030). Error messages 40 and 41 are not generated since they are abortive in nature. Sample output produced by this run stream is shown in Figure AST13-2.

```
//ASTES113 JOB     (ACCOUNTING INFO)
//*
//*   GENERATE ALL NON-ABORTIVE ERROR MESSAGES OF THE NEDS
//*   TO ETS/AS MASTER FILE TTRANSACTION CONVERSION-EDIT PROGRAM
//*
//TES113A EXEC ECCF110,
//       INTRTRN=ECINTRA
//*
//*   EDIT NEDS MASTER FILE TRANSACTIONS SPECIALLY CODED TO
//*   GENERATE THE ERROR MESSAGES OF CCENETR (EC0030)
//*
//CONVERT.INPUT DD *
STCNTYAUC                                                                      BR0
112222123YY1SPFSSU2ENUXEHCESTCOESTSASBSUSRAACARCRESACRFSBCLRESDORESRRESNGRFSRAA1
112222123COMACCUMBCCOMDUCUMROCONGCWINDSACINDSBCCOKEINDDUINDROINUNGIWDINPG     AA2
112222123INCRESINCIWINCCARNRESARNINDRRNCMLTVFHGSHVVEHGOFFHWFHVVEHDOFFHDDLLOCPAA3
112222123AIRMAIRCIVAIRCMVESCVESDVESROEVPGEVPSDLEVPGML IMACCRURALRSUBURBURBANRDAA4
112222123DIRTRDSDRTASCONACRWNDFRLANDTWLDFIRET/AMANRRNT/AAGRBRNT/AURHTDAYFIRESAA5
112222123BOSCTSPFSTSO2ESNOXESTHCESTICOESTIM                                   AA7
//CONVERT.OPTIONS DD *
RO FLAGG LOST
```

Figure AST13-1. Run Stream

```
                              NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                              PAGE     1

PROGRAM NAME: CCENETR (EC0030)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTION CARD

80 FLAGG LOST
         *** CCENETR 042 CONDITIONAL - INVALID FLAGW OPTION, DEFAULT OF NO FLAGW USED

80 FLAGG LOST
         *** CCENETR 043 CONDITIONAL - INVALID LIST OPTION, DEFAULT OF NO LIST USED

    CONTROL DATE IS 80  ,  ERROR OPTION IS NOFLAGW,  LIST OPTION IS NOLIST



STCNTYAQC                                                                        BB0
BEB  EB E                                                                        BBB
         *** CCENETR 085 ERROR - COLUMN 01 - INVALID STATE-TRANSACTION REJECTED
         *** CCENETR 086 ERROR - COLUMN 03 - INVALID COUNTY-TRANSACTION REJECTED
         *** CCENETR 087 ERROR - COLUMN 07 - INVALID AQCR-TRANSACTION REJECTED
         *** CCENETR 088 ERROR - COLUMN 78 - INVALID ACTION-CODE-TRANSACTION REJECTED
         *** CCENETR 031 ERROR - COLUMN 79 - CARD IS NOT AREA SOURCE CARD-TRANSACTION REJECTED
         *** CCENETR 032 ERROR - COLUMN 80 - INVALID CARD NUMBER-TRANSA  CTION REJECTED

112222123YY1SPESS02ENOXEHCES1COESTSASBSDSRAACABCRESACRESBCLRESDORESRRESNGRESWAA1
        BEB   EB  EB  EB   EB   EBEBEBEBBEB EB EB   EB     EB   EB  EB   EB  E
         *** CCENETR 073 ERROR - COLUMN 10 - INVALID YEAR OF RECORD-FIELD REJECTED
         *** CCENETR 074 ERROR - COLUMN 12 - INVALID SIP PARTICULATE EMISSION ESTIMATE-FIELD REJECTED
         *** CCENETR 075 ERROR - COLUMN 17 - INVALID SIP SO2 EMISSION ESTIMATE-FIELD REJECTED
         *** CCENETR 076 ERROR - COLUMN 21 - INVALID SIP NOX EMISSION ESTIMATE-FIELD REJECTED
         *** CCENETR 077 ERROR - COLUMN 25 - INVALID SIP HC EMISSION ESTIMATE-FIELD REJECTED
         *** CCENETR 078 ERROR - COLUMN 30 - INVALID SIP CO EMISSION ESTIMATE-FIELD REJECTED
         *** CCENETR 079 ERROR - COLUMN 35 - INVALID ANTHRACITE COAL SULFUR CONTENTS-FIELD REJECTED
         *** CCENETR 080 ERROR - COLUMN 37 - INVALID BITUMINOUS COAL SULFUR CONTENTS-FIELD REJECTED
         *** CCENETR 081 ERROR - COLUMN 39 - INVALID DISTILLATE OIL SULFUR CONTENTS-FIELD REJECTED
         *** CCENETR 082 ERROR - COLUMN 41 - INVALID RESIDUAL OIL SULFUR CONTENTS-FIELD REJECTED
         *** CCENETR 083 ERROR - COLUMN 43 - INVALID ANTHRACITE COAL ASH CONTENTS-FIELD REJECTED
         *** CCENETR 084 ERROR - COLUMN 46 - INVALID BITUMINOUS COAL ASH CONTENTS-FIELD REJECTED
         *** CCENETR 001 ERROR - COLUMN 49 - INVALID RESIDENTIAL ANTHRACITE COAL-FIELD REJECTED
         *** CCENETR 002 ERROR - COLUMN 54 - INVALID RESIDENTIAL BITUMINOUS COAL-FIELD REJECTED
         *** CCENETR 003 ERROR - COLUMN 60 - INVALID RESIDENTIAL DISTILLATE OIL-FIELD REJECTED
```

Figure AST13-2. Sample Output (Page 1 of 4)

```
                         NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                                  PAGE    2

          *** CCENETR 004 ERROR - COLUMN 65 - INVALID RESIDENTIAL RESIDUAL OIL-FIELD REJECTED
          *** CCENETR 005 ERROR - COLUMN 69 - INVALID RESIDENTIAL NATURAL GAS-FIELD REJECTED
          *** CCENETR 006 ERROR - COLUMN 74 - INVALID RESIDENTIAL WOOD-FIELD REJECTED

112222123COMACCOMBCCOMDOCOMROCONGCWINDSACINDSBCCOKEINDDOINDROINDNGIWDINPG    AA2
         B   EB   EB   EB   EB  EBEB    EB     EB  EB   EB   EB   EB EB  E
          *** CCENETR 007 ERROR - COLUMN 10 - INVALID COMM/INST ANTHRACITE COAL-FIELD REJECTED
          *** CCENETR 008 ERROR - COLUMN 15 - INVALID COMM/INST BITUMINOUS COAL-FIELD REJECTED
          *** CCENETR 009 ERROR - COLUMN 20 - INVALID COMM/INST DISTILLATE OIL-FIELD REJECTED
          *** CCENETR 010 ERROR - COLUMN 25 - INVALID COMM/INST RESIDUAL OIL-FIELD REJECTED
          *** CCENETR 011 ERROR - COLUMN 30 - INVALID COMM/INST NATURAL GAS-FIELD REJECTED
          *** CCENETR 012 ERROR - COLUMN 34 - INVALID COMM/INST WOOD-FIELD REJECTED
          *** CCENETR 013 ERROR - COLUMN 36 - INVALID INDUSTRIAL ANTHRACITE COAL-FIELD REJECTED
          *** CCENETR 014 ERROR - COLUMN 42 - INVALID INDUSTRIAL BITUMINOUS COAL-FIELD REJECTED
          *** CCENETR 015 ERROR - COLUMN 48 - INVALID INDUSTRIAL COKE-FIELD REJECTED
          *** CCENETR 016 ERROR - COLUMN 52 - INVALID INDUSTRIAL DISTILLATE OIL-FIELD REJECTED
          *** CCENETR 017 ERROR - COLUMN 57 - INVALID INDUSTRIAL RESIDUAL OIL-FIELD REJECTED
          *** CCENETR 018 ERROR - COLUMN 62 - INVALID INDUSTRIAL NATURAL GAS-FIELD REJECTED
          *** CCENETR 019 ERROR - COLUMN 67 - INVALID INDUSTRIAL WOOD-FIELD REJECTED
          *** CCENETR 020 ERROR - COLUMN 70 - INVALID INDUSTRIAL PROCESS GAS-FIELD REJECTED

112222123INCRESINCININCCBRNRESHRNINDBRNCMLTVEHGSHVVEHGOFFHWYHVVEHDOFFHDDLLOCPAA3
         B    EB   EB  EB     EB     EB   EB      EB    EB    EB    EB   EB   EB
          *** CCENETR 021 ERROR - COLUMN 10 - INVALID RESIDENTIAL ON SITE INCINERATION-FIELD REJECTED
          *** CCENETR 022 ERROR - COLUMN 16 - INVALID INDUSTRIAL ON SITE INCINERATION-FIELD REJECTED
          *** CCENETR 023 ERROR - COLUMN 21 - INVALID COMM/INST ON SITE INCINERATION-FIELD REJECTED
          *** CCENETR 024 ERROR - COLUMN 25 - INVALID RESIDENTIAL OPEN BURNING-FIELD REJECTED
          *** CCENETR 025 ERROR - COLUMN 31 - INVALID INDUSTRIAL OPEN BURNING-FIELD REJECTED
          *** CCENETR 026 ERROR - COLUMN 37 - INVALID COMM/INST OPEN BURNING-FIELD REJECTED
          *** CCENETR 045 ERROR - COLUMN 72 - INVALID RAIL LOCOMOTIVE-FIELD REJECTED
          *** CCENETR 039 ERROR - COLUMN 55 - INVALID OFF HIWAY GAS-FIELD REJECTED
          *** CCENETR 044 ERROR - COLUMN 67 - INVALID OFF HIWAY DIESEL-FIELD REJECTED
          *** CCENETR 065 ERROR - COLUMN 42 - INVALID LIGHT VEHICLE GAS-FIELD REJECTED
          *** CCENETR 066 ERROR - COLUMN 49 - INVALID HEAVY VEHICLE GAS-FIELD REJECTED
          *** CCENETR 067 ERROR - COLUMN 61 - INVALID HEAVY VEHICLE DIESEL-FIELD REJECTED
          *** CCENETR 068 ERROR - COLUMN 77 - INVALID POPULATION CODE-FIELD REJECTED

112222123AIRMAIRCIVAIRCMVESCVESDVESRDEVPGEVPSDLEVPGMLIMACCRURALRSUBURBURBANRDAA4
         B EB    EB    EB  EB  EB    EB  EB     EB   EB     EB    EB    EB      E
          *** CCENETR 046 ERROR - COLUMN 10 - INVALID MILITARY AIRCRAFT LTO-FIELD REJECTED
          *** CCENETR 047 ERROR - COLUMN 14 - INVALID CIVIL AIRCRAFT LTO-FIELD REJECTED
          *** CCENETR 048 ERROR - COLUMN 20 - INVALID COMMERCIAL AIRCRAFT LTO-FIELD REJECTED
          *** CCENETR 049 ERROR - COLUMN 25 - INVALID COAL VESSELS-FIELD REJECTED
          *** CCENETR 050 ERROR - COLUMN 29 - INVALID DIESEL OIL VESSELS-FIELD REJECTED
          *** CCENETR 051 ERROR - COLUMN 33 - INVALID RESIDUAL OIL VESSELS-FIELD REJECTED
```

Figure AST13-2 - continued. Sample Output (Page 2 of 4)

```
                     NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                           PAGE     3

          *** CCENETR 052 ERROR - COLUMN 36 - INVALID GASOLINE VESSELS-FIELD REJECTED
          *** CCENETR 053 ERROR - COLUMN 42 - INVALID SOLVENT PURCHASED-FIELD REJECTED
          *** CCENETR 054 ERROR - COLUMN 48 - INVALID GASOLINE MARKETED-FIELD REJECTED
          *** CCENETR 069 ERROR - COLUMN 53 - INVALID LIMITED ACCESS ROADS-MVM-FIELD REJECTED
          *** CCENETR 070 ERROR - COLUMN 59 - INVALID RURAL ROADS-MVM-FIELD REJECTED
          *** CCENETR 071 ERROR - COLUMN 65 - INVALID SUBURBAN ROADS-MVM-FIELD REJECTED
          *** CCENETR 072 ERROR - COLUMN 71 - INVALID URBAN ROADS-MVM-FIELD REJECTED

112222123DIRTRDSDRTASCONACRWNDERLANDTWLDFIRET/AMANBRNT/AAGRBRNT/AORHTDAYFIRESAAS
        B     EB   EB     EB   EB   EB       EB EB     EB EB     EB EB  EB EB   E
          *** CCENETR 055 ERROR - COLUMN 10 - INVALID DIRT ROAD TRAVELED-FIELD REJECTED
          *** CCENETR 056 ERROR - COLUMN 17 - INVALID DIRT AIR STRIPS-FIELD REJECTED
          *** CCENETR 057 ERROR - COLUMN 22 - INVALID CONSTRUCTION ACRES-FIELD REJECTED
          *** CCENETR 058 ERROR - COLUMN 28 - INVALID MISC WIND EROSION-FIELD REJECTED
          *** CCENETR 059 ERROR - COLUMN 33 - INVALID LAND TILLING-FIELD REJECTED
          *** CCENETR 064 ERROR - COLUMN 73 - INVALID STRUCTURE FIRES-FIELD REJECTED
          *** CCENETR 060 ERROR - COLUMN 38 - INVALID FOREST WILDFIRES-FIELD REJECTED
          *** CCENETR 027 ERROR - COLUMN 45 - INVALID FOREST WILDFIRE TONS/ACRE BURNED-FIELD REJECTED
          *** CCENETR 061 ERROR - COLUMN 48 - INVALID MANAGED/PRESCRIBED BURNING-FIELD REJECTED
          *** CCENETR 028 ERROR - COLUMN 54 - INVALID MANAGED BURNING TONS/ACRE BURNED-FIELD REJECTED
          *** CCENETR 062 ERROR - COLUMN 57 - INVALID AGRICULTURAL FIELD BURNING-FIELD REJECTED
          *** CCENETR 029 ERROR - COLUMN 63 - INVALID AGR FIELD BURN TONS/ACRE BURNED-FIELD REJECTED
          *** CCENETR 063 ERROR - COLUMN 66 - INVALID FROST CONTROL (ORCHARD HEATERS)-FIELD REJECTED
          *** CCENETR 030 ERROR - COLUMN 70 - INVALID FROST CONTROL DAYS/FIRED-FIELD REJECTED

11222212380SCTSPESTSO2ESNOXESTHCESTICOESTIM                                   AA7
           BEB    EB   EB     EB    EB     E
          *** CCENETR 038 ERROR - COLUMN 12 - INVALID SOURCE-CODE-TRANSACTION REJECTED
          *** CCENETR 033 ERROR - COLUMN 14 - INVALID SOURCE TSP EMISSION ESTIMATE-FIELD REJECTED
          *** CCENETR 034 ERROR - COLUMN 20 - INVALID SOURCE SO2 EMISSION ESTIMATE-FIELD REJECTED
          *** CCENETR 035 ERROR - COLUMN 25 - INVALID SOURCE NOX EMISSION ESTIMATE-FIELD REJECTED
          *** CCENETR 036 ERROR - COLUMN 31 - INVALID SOURCE HC EMISSION ESTIMATE-FIELD REJECTED
          *** CCENETR 037 ERROR - COLUMN 37 - INVALID SOURCE CO EMISSION ESTIMATE-FIELD REJECTED
```

Figure AST13-2 - continued. Sample Output (Page 3 of 4)

```
                    NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                                PAGE     4

NUMBER OF NEDS TRANSCTIONS READ:                                   7
NUMBER OF ERRORS DETECTED:                                        84
NUMBER OF ABORTS DETECTED:                                         0
NUMBER OF CONDITIONALS DETECTED:                                   2
NUMBER OF INTERNAL TRANSACTIONS WRITTEN:                          99
```

Figure AST13-2 - continued. Sample Output (Page 4 of 4)

EIS/AS Test 14 - Ad Hoc

Execute the Master File Emission Factor Transaction Generator Program and Store the Generated Transactions

In this test run, master file emission factor transactions are generated using the cataloged procedure ECMSM10 which executes CMSEFGN (EC0080), the master file emission factor transaction generator program.

The master file emission factor transactions generated by CMSEFGN (EC0080) are stored for future use. See EIS/AS Test 9 for a discussion of this program.

The run stream for this test run contains the JCL needed to generate the transactions. Substitutable parameters are used to supply the names of the input emission factor file and master file, and the output transaction file. The names of these files are ECEMFL2 (created in Test 11), ECMSTR3 (created in Test 5), and ECINTR5, respectively. The DD (data definition) information for the option card file is also supplied in the run stream. This run stream is shown in Figure AST14-1.

The FLAGW option field of the option card is blank, therefore, the default of NOFLAGW is in effect and the warning messages will not be printed. A category date of 76001 (Julian date expressed as YYDDD, where YY is the year and DDD is the day of the year) is supplied on the option card. This date controls the generation of transactions by creating category-2 transactions only when the date of an emission factor file category record is greater than the category date specified on the option card. No category-5 transactions are created because a pollutant date is not specified on the option card. Sample output produced by this run stream is shown in Figure AST14-2.

```
//ASTEST14 JOB    (ACCOUNTING INFO)
//*
//*   EXECUTE THE MASTER FILE EMISSION FACTOR TRANSACTION
//*   GENERATOR PROGRAM AND STORE THE GENERATED TRANSACTIONS
//*
//TEST14A EXEC ECMSM10,
//       EMFCFIL=ECEMFL2,
//       MSTRFIL=ECMSTR3,
//       INTRTRN=ECINTR5
//*
//*   GENERATE MASTER FILE EMISSION FACTOR TRANSACTIONS AND
//*   STORE THEM FOR FUTURE USE
//*
//GENER.OPTIONS DD *
          CDAT 76001
```

Figure AST14-1. Run Stream

BEST DOCUMENT AVAILABLE

```
                                        MASTER FILE EMISSION FACTOR TRANSACTION GENERATOR PROGRAM                                    PAGE    1


PROGRAM NAME: CMSEFGN (EC0080)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  NOFLAGS     CDAT 76001


                                                          DATE: CATEGORY 76/001  POLLUTANT  N/A


        *** CMSEFGN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64


NUMBER OF MASTER FILE RECORDS READ:                 420
NUMBER OF EMISSION FACTOR RECORDS READ:             683
NUMBER OF CATEGORY-2 TRANSACTIONS CREATED:           20
NUMBER OF CATEGORY-5 TRANSACTIONS CREATED:            0

NUMBER OF WARNING MESSAGES:                       3,774
NUMBER OF CONDITIONAL MESSAGES:                       1
NUMBER OF ERROR MESSAGES:                             0
NUMBER OF ABORT MESSAGES:                             0
NUMBER OF DISASTER MESSAGES:                          0
```

Figure AST14-2. Sample Output

EIS/AS Test 15 - Ad Hoc

Exercise All Options of the Master File Internal Transaction Emission Factor Insertion Program

In this test run, all options of CMSEFIN (EC0060) are exercised using the cataloged procedure ECMST10 which executes CSRINTR (EC0050), the master file internal transaction sort program; and CMSEFIN (EC0060), the master file internal transaction emission factor insertion program.

The internal transactions generated in Test 14 are sorted by CSRINTR (EC0050) into the sequence required by CMSEFIN (EC0060). See Test 2 for a discussion of these programs.

The run stream for this test run contains the JCL needed to insert emission factors from the emission factor file into the internal transactions created in Test 14. This run stream is shown in Figure AST15-1.

Substitutable parameters are used to supply the names of the input emission factor file and internal transaction file, and the output internal transaction file with the inserted emission factors. The names of these files are ECEMFL2 (created in Test 11), ECINTR5, and ECINTR6, respectively. The DD (data definition) information for the option card file of CMSEFIN (EC0060) is also supplied.

The FLAGW option is specified on the option card so that all warning messages will be printed in the diagnostic report output from CMSEFIN (EC0060). All available fields are selected for insertion or overriding: nitrogen content, sulfur content, ash content, emission factor, confidence level, and pollutant-specific data. Also, a category date and a pollutant date are specified to control the insert/override action. Sample output produced by this run stream is shown in Figure AST15-2.

```
//ASTEST15 JOB     (ACCOUNTING INFO)
//*
//*   EXERCISE ALL OPTIONS OF THE MASTER FILE INTERNAL
//*   TRANSACTION EMISSION FACTOR INSERTION PROGRAM
//*
//TEST15A EXEC ECMS110,
//        EMFCFIL=ECEMFL2,
//        OLDINTR=ECINTR5,
//        NEWINTR=ECINTR6
//*
//*   SPECIFY 'FLAGN' ON THE OPTION CARD;
//*   SELECT ALL AVAILABLE FIELDS FOR INSERTION
//*   OR OVERRIDING:  NITROGEN CONTENT, SULFUR
//*   CONTENT, ASH CONTENT, EMISSION FACTOR,
//*   CONFIDENCE LEVEL, AND POLLUTANT-SPECIFIC
//*   DATA;  SPECIFY A CATEGORY DATE AND A
//*   POLLUTANT DATE TO CONTROL THE INSERT/
//*   OVERRIDE ACTION
//*
//INSERT.OPTIONS DD *
FLAGN   NIT IO SUL IO ASH IO EMISSION IO CONF IO SPEC IO CDAT 75001 PDAT 75001
```

Figure AST15-1. Run Stream

```
                    EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE     1

PROGRAM NAME: CSRINIR (EC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                              20
NUMBER OF TRANSACTIONS WRITTEN:                                 21
```

Figure AST15-2. Sample Output (Page 1 of 2)

```
                                        EMISSION FACTOR INSERTION PROGRAM                                        PAGE    1


PROGRAM NAME: CRSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  FLAGN

          FIELDS SELECTED FOR INSERTIONS:  NIT  SUL  ASH  EMISSION  CONF  SPEC  CDAT 75001 PDAT 75001

          FIELDS TO BE OVERRIDDEN:  NIT  SUL  ASH  EMISSION  CONF  SPEC


NITROGEN I  C  SULFUR I  L  ASH I  C  EMISSION FACTOR I  U  CONF LEVEL I  F  SPEC DATA I  C    DATE: CATEGORY 75001  POLLUTANT 75001


          *** CRSEFIN 008 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64


NUMBER OF INPUT TRANSACTIONS:                         21
NUMBER OF EMISSION FACTOR RECORDS READ:              676
NUMBER OF STATE AND LOCAL INSERTIONS MADE:            20
NUMBER OF FEDERAL INSERTIONS MADE:                     0
NUMBER OF OUTPUT TRANSACTIONS:                        21
```

Figure AST15-2 - continued. Sample Output
(Page 2 of 2)

EIS/AS Test 16 - Ad Hoc

Execute a COBOL Retrieval and Produce a Formatted Dump of the Answer File

In this test run, a COBOL retrieval is executed using the cataloged procedure ECRTM30 which executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and CRTGENR (EC0100), the generated retrieval program. The answer file produced by this procedure is listed in a formatted dump by using the cataloged procedure ECRPM30 which executes CRPDUMP (EC0140), the master file formatted dump program.

The user-supplied COBOL statements are combined with CRTSKEL, the retrieval program, by CRTLNGP (EC0090) to form the generated retrieval program CRTGENR (EC0100). The generated program is then compiled, link-edited, and executed. An EIS/AS master file is input to CRTGENR (EC0100) which selects records according to the user-supplied COBOL statements and creates an answer file. This answer file is passed to CRPDUMP (EC0140) to be listed in a formatted dump. Refer to Test 7 for a discussion of CRTLNGP (EC0090) and CRTGENR (EC0100); and refer to Test 4 for a discussion of CRPDUMP (EC0140).

The run stream for this test run contains the JCL needed to execute the retrieval package and produce a formatted dump of the answer file. The purpose of this test run is to retrieve all master file data that has not been submitted to NEDS. All data flags in each master file record are checked for 'S'. If a flag does not contain 'S', that record is written to the answer file. This run stream is shown in Figure AST16-1. Sample output produced by this run stream is shown in Figure AST16-2.

Substitutable parameters are used to supply the names of the master file input to CRTGENR (EC0100) and the answer file output from CRTGENR (EC0100). A substitutable parameter is also used to supply the name of the answer file input to CRPDUMP (EC0140). The names of the master file and answer file are ECMSTR7 (created in Test 9) and ECANSR3, respectively. The DD (data definition) information for the COBOL statements input to CRTLNGP (EC0090) and the option card file input to CRPDUMP (EC0140) are also supplied.

The user-supplied COBOL statements must conform to ANS COBOL format. The COBOL statements in this test run are included in the run stream.

No option card is supplied for CRPDUMP (EC0140), therefore, the following defaults are assumed by the program: 55 printed lines per page, no records are skipped, and all records will be dumped.

```
//ASTEST16 JOB     (ACCOUNTING INFO)
//*
//*    EXECUTE A COBOL RETRIEVAL AND LIST THE ANSWER FILE USING THE
//*    MASTER FILE FORMATTED DUMP PROGRAM
//*
//TEST16A EXEC ECRTM30,
//         MSTRFIL=FCMSTR7,
//         ANSRFIL=FLANSR3
//*
//*    GENERATE AND EXECUTE A MASTER FILE RETRIEVAL PROGRAM
//*    THE USER SPECIFICATIONS FOR WHICH ARE PROVIDED IN
//*    IN-STREAM COBOL STATEMENTS
//*
//GENER.INPUT DD *
$$SELECT USER
            IF RECORD-IS-DESCRIPITON
               PERFORM USER-DESC-PARA THRU USER-DESC-PARA-END
            ELSE
               IF RECORD-IS-CATEGORY
                  PERFORM USER-CAT-PARA THRU USER-CAT-PARA-END
               ELSE
                  PERFORM USER-COMM-PARA THRU USER-COMM-PARA-END.
            GO TO USER-QUALIFICATION-END.
         USER-DESC-PARA.
            IF NEDS-A1-FLAG IS NOT EQUAL TO 'S' OR
               NEDS-A3-FLAG IS NOT EQUAL TO 'S' OR
               NEDS-A4-FLAG IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-0-1 IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-0-2 IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-0-3 IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-0-4 IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-0-5 IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-0-6 IS NOT EQUAL TO 'S'
               PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
            ELSE
               MOVE BINARY-1 TO DESC-SUB
               PERFORM USER-DESC-REPEAT THRU USER-DESC-REPEAT-END
                  UNTIL DESC-SUB IS GREATER THAN DESC-NBR-POLL.
         USER-DESC-PARA-END.
            EXIT.
         USER-DESC-REPEAT.
            IF EIS-FLAG-CARD-0-7 (DESC-SUB) IS NOT EQUAL TO 'S'
               PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
               MOVE DESC-NBR-POLL TO DESC-SUB.
            ADD BINARY-1 TO DESC-SUB.
         USER-DESC-REPEAT-END.
            EXIT.
         USER-CAT-PARA.
            IF NEDS-FLAG IS NOT EQUAL TO 'S' OR
               NEDS-A7-FLAG IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-1-1 IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-1-2 IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-1-3 IS NOT EQUAL TO 'S' OR
               EIS-FLAG-CARD-1-4 IS NOT EQUAL TO 'S'
               PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
            ELSE
               MOVE BINARY-1 TO CAT-SUB
               PERFORM USER-CAT-REPEAT THRU USER-CAT-REPEAT-END
```

(Page 1 of 2)

Figure AST16-1. Run Stream

```
                  UNTIL CAT-SUB IS GREATER THAN CAT-NBR-POLL.
          USER-CAT-PARA-END.
            EXIT.
          USER-CAT-REPEAT.
            IF FIS-FLAG-CARD-1-5 (CAT-SUB) IS NOT EQUAL TO 'S'
               PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
               MOVE CAT-NBR-POLL TO CAT-SUB.
            ADD BINARY-1 TO CAT-SUB.
          USER-CAT-REPEAT-END.
            EXIT.
          USER-COMM-PARA.
            IF NEDS-A6-FLAG IS EQUAL TO SPACE AND
               (ETS-FLAG-CARD-2-1 IS NOT EQUAL TO 'S' OR
                ETS-FLAG-CARD-2-2 IS NOT EQUAL TO 'S')
               PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
            ELSE
               IF NEDS-A6-FLAG IS NOT EQUAL TO 'S'
                  PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END.
          USER-COMM-PARA-END.
            EXIT.
$$END
//TEST16B EXEC ECRPM30,
//       MSTRFIL=FCANSW3
//*
//*    DUMP THE ANSWER FILE FROM STEP A
//*
//DUMP.OPTIONS DD *
```

(Page 2 of 2)

Figure AST16-1 - continued. Run Stream

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```
                        EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                    PAGE      1

PROGRAM NAME: CNTLAGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


INPUT (CONTROL CARDS):
$$SELECT USER
           IF RECORD-IS-DESCRIPTION
              PERFORM USER-DESC-PARA THRU USER-DESC-PARA-END
           ELSE
              IF RECORD-IS-CATEGORY
                 PERFORM USER-CAT-PARA THRU USER-CAT-PARA-END
              ELSE
                 PERFORM USER-COMM-PARA THRU USER-COMM-PARA-END.
           GO TO USER-QUALIFICATION-END.
         USER-DESC-PARA.
           IF NEDS-A1-FLAG IS NOT EQUAL TO 'S' OR
              NEDS-A3-FLAG IS NOT EQUAL TO 'S' OR
              NEDS-A4-FLAG IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-1 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-2 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-3 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-4 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-5 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-6 IS NOT EQUAL TO 'S'
              PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
           ELSE
              MOVE BINARY-1 TO DESC-SUB
              PERFORM USER-DESC-REPEAT THRU USER-DESC-REPEAT-END
                 UNTIL DESC-SUB IS GREATER THAN DESC-NBR-POLL.
         USER-DESC-PARA-END.
           EXIT.
         USER-DESC-REPEAT.
           IF EIS-FLAG-CARD-0-7 (DESC-SUB) IS NOT EQUAL TO 'S'
              PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
              MOVE DESC-NBR-POLL TO DESC-SUB.
           ADD BINARY-1 TO DESC-SUB.
         USER-DESC-REPEAT-END.
           EXIT.
         USER-CAT-PARA.
           IF NEDS-FLAG IS NOT EQUAL TO 'S' OR
              NEDS-A7-FLAG IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-1-1 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-1-2 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-1-3 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-1-4 IS NOT EQUAL TO 'S'
              PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
           ELSE
```

Figure AST16-2. Sample Output

(Page 1 of 6)

BEST DOCUMENT AVAILABLE

```
                    ETS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                          PAGE     2

             MOVE BINARY-1 TO CAT-SUB
             PERFORM USER-CAT-REPEAT THRU USER-CAT-REPEAT-END
                UNTIL CAT-SUB IS GREATER THAN CAT-NBR-POLL.
          USER-CAT-PARA-END.
            EXIT.
          USER-CAT-REPEAT.
            IF ETS-FLAG-CARD-1-5 (CAT-SUB) IS NOT EQUAL TO 'S'
               PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
               MOVE CAT-NBR-POLL TO CAT-SUB.
            ADD BINARY-1 TO CAT-SUB.
          USER-CAT-REPEAT-END.
            EXIT.
          USER-COMM-PARA.
            IF NEDS-A6-FLAG IS EQUAL TO SPACE AND
               (ETS-FLAG-CARD-2-1 IS NOT EQUAL TO 'S' OR
                ETS-FLAG-CARD-2-2 IS NOT EQUAL TO 'S')
               PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
            ELSE
               IF NEDS-A6-FLAG IS NOT EQUAL TO 'S'
                  PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END.
          USER-COMM-PARA-END.
            EXIT.
$$END


NUMBER OF CONTROL CARDS READ:                          65
NUMBER OF RETRIEVAL SKELETON RECORDS READ:            837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:           954
NUMBER OF CONDITIONAL MESSAGES:                         0
NUMBER OF ABORT MESSAGES:                               0

PROGRAM NAME: CKTLNGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

Figure AST16-2 - continued. Sample Output

(Page 2 of 6)

BEST DOCUMENT AVAILABLE

```
                         EIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                               PAGE     1
PROGRAM NAME: CHTGENR (ECU100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF MASTER FILE RECORDS READ:        371
NUMBER OF MASTER FILE RECORDS WRITTEN:     284
NUMBER OF CONDITIONAL MESSAGES:              0
NUMBER OF ABORT MESSAGES:                    0
```

Figure AST16-2 - continued. Sample Output (Page 3 of 6)

```
                         EIS/AS MASTER FILE FORMATTED DUMP PROGRAM  -  DIAGNOSTIC REPORT                          PAGE

PROGRAM NAME: CRPDUMP (EC0140)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT:  55 LINES PER PAGE;        0 RECORDS SKIPPED;     ALL RECORDS TO BE DUMPED

*** CRPDUMP 003 CONDITIONAL - NO VALID LINE SPECIFICATION - DEFAULT OF 55 ASSUMED
*** CRPDUMP 004 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE SKIPPED - DUMP STARTS AT FIRST RECORD
*** CRPDUMP 005 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE DUMPED - ENTIRE FILE DUMPED

NUMBER OF DESCRIPITON RECORDS DUMPED:                      0
NUMBER OF CATEGORY RECORDS DUMPED:                       284
NUMBER OF COMMENT RECORDS DUMPED:                          0
TOTAL NUMBER OF RECORDS READ:                            284
```

Figure AST16-2 - continued. Sample Output (Page 4 of 6)

```
                                              EIS/AS MASTER FILE FORMATTED DUMP                                               PAGE      1

     STATE=06    COUNTY=2238    GEOGR/SUBALLOC/#=00000    CATEGRY/#=023    DISAGGR/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    BATCH=0
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=COMM-INST ON-SITE INCINER   YR/OF/INFO=79  PRCSS/RATE=000002350  CATEGRY/ADJ=            UNITS/CD=
UNITS/CD/DESC=                  UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=08,MAR=09,APR=08,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=      THRUPT/RATIO=         MAX/HRLY/THRUPT=                DATA/CONFIDENCE/RATNG=0
NITRG/%=        SULF/%=     ASH/%=        HEAT/CONT=          UNIFRM/HRLY/THRUPT=       HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                     INFO/SOURCE/CODE=S
INFO/SRCE/NARR=                              EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=06
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101   0000008000     0                    F                                  SUSPENDED PART.     C      0000000      0
42101   0000008000     0                    F                                  SUSPENDED PART.     C      0000000      0
42401   0000002500     0                    F                                  SULFUR DIOXIDE      C      0000000      0
42602   0000003000     0                    F                                     N  OXIDES        C      0000000      0
43101                  0                    F                                  HYDROCARBONS        S      0000000      0
42269                  0                    L                                  TOTAL SULFUR        S      0000000      0

------------------------------------------------------------------------------------------------------------------------------------

     STATE=06    COUNTY=2238    GEOGR/SUBALLOC/#=00000    CATEGRY/#=047    DISAGGR/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    BATCH=0
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=CIVIL AIRCRAFT LTO'S           YR/OF/INFO=79  PRCSS/RATE=000005005  CATEGRY/ADJ=            UNITS/CD=
UNITS/CD/DESC=                  UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=08,MAR=09,APR=08,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=      THRUPT/RATIO=         MAX/HRLY/THRUPT=                DATA/CONFIDENCE/RATNG=0
NITRG/%=        SULF/%=     ASH/%=        HEAT/CONT=          UNIFRM/HRLY/THRUPT=       HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                     INFO/SOURCE/CODE=S
INFO/SRCE/NARR=                              EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=05
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101   0000000020     0                    F                                  SUSPENDED PART.     C      0000000      0
42101   0000000020     0                    F                                  SUSPENDED PART.     C      0000000      0
42401   0000000010     0                    F                                  SULFUR DIOXIDE      C      0000000      0
42602   0000000028     0                    F                                     N  OXIDES        C      0000000      0
43101                  0                    F                                  HYDROCARBONS        S      0000000      0

------------------------------------------------------------------------------------------------------------------------------------

     STATE=06    COUNTY=2238    GEOGR/SUBALLOC/#=00000    CATEGRY/#=060    DISAGGR/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    BATCH=0
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=FOREST WILD FIRES              YR/OF/INFO=79  PRCSS/RATE=           CATEGRY/ADJ=0000900  UNITS/CD=
UNITS/CD/DESC=                  UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=08,MAR=09,APR=08,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=      THRUPT/RATIO=         MAX/HRLY/THRUPT=                DATA/CONFIDENCE/RATNG=0
NITRG/%=        SULF/%=     ASH/%=        HEAT/CONT=          UNIFRM/HRLY/THRUPT=       HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                     INFO/SOURCE/CODE=F
INFO/SRCE/NARR=                              EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=06
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101   0000017000     0                    F                                  SUSPENDED PART.     C      0000000      0
42101   0000017000     0                    F                                  SUSPENDED PART.     C      0000000      0
42401   0000000150     0                    F                                  SULFUR DIOXIDE      C      0000000      0
42602   0000004000     0                    F                                     N  OXIDES        C      0000000      0
43101                  0                    F                                  HYDROCARBONS        S      0000000      0
42269                  0                    L                                  TOTAL SULFUR        S      0000000      0
```

Figure AST16-2 - continued. Sample Output (Page 5 of 6)

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```
                                                       EIS/AS MASTER FILE FORMATTED DUMP                                        PAGE     95

     STATE=42   COUNTY=2440   GEOGR/SUBALLOC/#=00000   CATEGRY/#=060   DISAGGR/#=00   RECORD/TYPE/(KEY)=1   LINE/#=000   BATCH=0
AQCR=167  REC/TYPE=CA  CATEGRY/DESC=FOREST WILD FIRES          YR/OF/INFO=   PRCSS/RATE=000000098  CATEGRY/ADJ=0000009  UNITS/CD=
UNITS/CD/DESC=             UNIFRM/THRUPT=   MNTHLY/THRUPT/%: (JAN=  ,FEB=  ,MAR=  ,APR=  ,MAY=  ,JUN=  ,JUL=  ,AUG=  ,SEP=  ,OCT=
NOV=  ,DEC=  ) HRS/PER/DAY=    DAYS/PER/WK=    WKS/PER/YR=     THRUPT/RATIO=       MAX/HRLY/THRUPT=            DATA/CONFIDENCE/RATNG=
NITRG/%=       SULF/%=    ASH/%=      HEAT/CONT=       UNIFRM/HRLY/THRUPT=    HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=                              INFO/SOURCE/CODE=
INFO/SRCE/MARK=                        EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=05
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101    0000017000       0                       F                             SUSPENDED PART.     C       0000007       0
42101    0000017000       0                       F                             SUSPENDED PART.     C       0000007       0
42401    0000000150       0                       F                             SULFUR DIOXIDE      C       0000000       0
42602    0000004000       0                       F                               N  OXIDES         C       0000002       0
43101                                             F      0170000SUS             HYDROCARBONS        S       0000000       0

---------------------------------------------------------------------------------------------------------------------------------------

     STATE=42   COUNTY=2440   GEOGR/SUBALLOC/#=00000   CATEGRY/#=061   DISAGGR/#=00   RECORD/TYPE/(KEY)=1   LINE/#=000   BATCH=0
AQCR=167  REC/TYPE=CA  CATEGRY/DESC=MANAGED BURNING-PRESCRIBE  YR/OF/INFO=   PRCSS/RATE=000005875  CATEGRY/ADJ=0000003  UNITS/CD=
UNITS/CD/DESC=             UNIFRM/THRUPT=   MNTHLY/THRUPT/%: (JAN=  ,FEB=  ,MAR=  ,APR=  ,MAY=  ,JUN=  ,JUL=  ,AUG=  ,SEP=  ,OCT=
NOV=  ,DEC=  ) HRS/PER/DAY=    DAYS/PER/WK=    WKS/PER/YR=     THRUPT/RATIO=       MAX/HRLY/THRUPT=            DATA/CONFIDENCE/RATNG=
NITRG/%=       SULF/%=    ASH/%=      HEAT/CONT=       UNIFRM/HRLY/THRUPT=    HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=                              INFO/SOURCE/CODE=
INFO/SRCE/MARK=                        EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=05
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101    0000017000       0                       F                             SUSPENDED PART.     C       0000150       0
42101    0000017000       0                       F                             SUSPENDED PART.     C       0000150       0
42401    0000000150       0                       F                             SULFUR DIOXIDE      C       0000001       0
42602    0000004000       0                       F                               N  OXIDES         C       0000035       0
43101                                             F      0170000SUS             HYDROCARBONS        S       0000000       0
```

Figure AST16-2 - continued. Sample Output (Page 6 of 6)

EIS/AS Test 17 - Ad Hoc

Execute an EIS/AS Retrieval and Produce a Detailed Report of the Answer File

In this test run, an EIS/AS retrieval is executed using the cataloged procedure ECRTM30 which executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and CRTGENR (EC0100), the generated retrieval program. The answer file produced by this procedure is listed in a detailed report using the cataloged procedure ECRPM20 which executes CRPMSTR (EC0130), the master file detailed report program.

The user-supplied EIS/AS retrieval language statements are combined with CRTSKEL, the retrieval skeleton program, by CRTLNGP (EC0090) to form the generated retrieval program, CRTGENR (EC0100). The generated program is then compiled, link-edited, and executed. An EIS/AS master file is input to CRTGENR (EC0100) which selects records according to the user-supplied retrieval language statements and creates an answer file. This answer file is passed to CRPMSTR (EC0130) to be listed in a detailed report. See Test 7 for a discussion of CRTLNGP (EC0090), CRTGENR (EC0100), and CRPMSTR (EC0130).

The run stream for this test run contains the JCL needed to execute the retrieval package and produce a detailed report of the answer file. The purpose of this test run is to retrieve all geographic suballocation and category disaggregation records that contain particulate data. The user should note that in this test run, if a description record qualifies for selection, then all category records subordinate to it will also be selected. This is because the $$SELECT card specifies that both record types are to be retrieved. Also, if a category record qualifies for selection, the description record to which it is subordinate will be selected. The run stream for this test run is shown in Figure AST17-1.

Substitutable parameters are used to supply the names of the master file input to CRTGENR (EC0100) and the answer file output from CRTGENR (EC0100). A substitutable parameter is also used to specify the name of the answer file input to CRPMSTR (EC0130). The names of the master file and answer file are ECMSTR7 (created in Test 9) and ECANSR4, respectively. The DD (data definition) information for the EIS/AS retrieval language statements input to CRTGENR (EC0100) and the option card file input to CRPMSTR (EC0130) are also supplied.

The EIS/AS retrieval language statements must conform to the format specified in Test 7. The retrieval language statements are also included in the run stream. The option card in this run stream specifies that the detailed report is to be printed with a maximum of 65 lines per page. Sample output produced by this run stream is shown in Figure AST17-2.

```
//ASTEST17 JOB     (ACCOUNTING INFO)
//*
//*   EXECUTE AN EIS/AS RETRIEVAL AND LIST THE
//*   ANSWER FILE USING THE MASTER FILE DETAILED
//*   REPORT PROGRAM
//*
//TEST17A EXEC ECRTR30,
//       MSTRFIL=ECMSTR7,
//       ANSRFIL=ECANSR8
//*
//*   CREATE AND EXECUTE A RETRIEVAL PROGRAM
//*   IN WHICH THE USER SPECIFICAITONS APPEAR
//*   AS EIS/AS RETRIEVAL LANGUAGE STATEMENTS
//*
//GENER.INPUT DD *
$$SELECT      0 1
(GEOG-SUBALLOCATION-NBR         N = '00000'                          AND
DESC-POLLUTANT-ID                 = '11101')                         OR
(GEOG-SUBALLOCATION-NBR         N = '00000'                          AND
CATEGORY-DISAGGREG-NBR          N = '00'                             AND
CAT-POLLUTANT-ID                  = '11101')
$$END
//TEST17B EXEC ECRPR20,
//       MSTRFIL=ECANSR8
//*
//*   LIST THE ANSWER FILE PRODUCED IN
//*   STEP A USING THE DETAILED REPORT PROGRAM
//*
//LIST.OPTIONS DD *
65
```

Figure AST17-1. Run Stream

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```
                          EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                          PAGE      1

PROGRAM NAME: CRTLAGP (ECU090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

INPUT (CONTROL CARDS):
$$SELECT       # 1
(GFOG-SUBALLOCATION-NBR          N = '00000'                           AND
DESC-POLLUTANT-ID                  = '11101')                          OR
(GFOG-SUBALLOCATION-NBR          N = '00000'                           AND
CATEGORY-DISAGGREG-NBR           N = '00'                              AND
CAT-POLLUTANT-ID                   = '11101')
$$END

NUMBER OF CONTROL CARDS READ:                        7
NUMBER OF RETRIEVAL SKELETON RECORDS READ:         837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:        922
NUMBER OF CONDITIONAL MESSAGES:                      0
NUMBER OF ABORT MESSAGES:                            0
```

Figure AST17-2. Sample Output (Page 1 of 6)

```
                    FIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                              PAGE     1
PROGRAM NAME: FRTGENR (FCU100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF MASTER FILE RECORDS READ:          371
NUMBER OF MASTER FILE RECORDS WRITTEN:        10
NUMBER OF CONDITIONAL MESSAGES:                0
NUMBER OF ABORT MESSAGES:                      0
```

Figure 4ST17-2 - continued. Sample Output (Page 2 of 6)

```
                                             AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                         DIAGNOSTIC REPORT                                                     PAGE

PROGRAM NAME: CRPMSTR (EC0130)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION IN EFFECT: 65 LINES PER PAGE MAXIMUM


NUMBER OF RECORDS READ:                    10
NUMBER OF DESCRIPTION RECORDS:              3
NUMBER OF CATEGORY RECORDS:                 7
NUMBER OF COMMENT RECORDS:                  0
```

Figure AST17-2 - continued. Sample Output (Page 3 of 6)

```
                                    AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                   FILE LISTING
                                                                                                                 PAGE     1
****************
**DESCRIPTION**   STATE   COUNTY   AQCR   AQCR NAME
****************                                                                        PLANT ID   GEOG SUB #   SMSA   BATCH
                  -------------------------------------------------------------------------------------------------------------
                   31      0015     011    WESTERN PART OF STATE OU                      0195        00135      1257     0

  RECORD   CATEGORY    CATEGORY      AIR     DEFINED      AREA                         MAJOR                SUBALLOCATION TECHNIQUE
   TYPE     NUMBER     DISAG  #     BASIN   AREA CODE     NAME                        ACTIVITY                CODE   DESCRIPTION
  --------------------------------------------------------------------------------------------------------------------------------
    SG       000          00         011       123        CAPE'S COVE                 FARMING                  15     CAASE

  DATE      SIP BASE    PROJ'D      SOURCE           LENGTH          PCP       POPULATION            NUMBER  UTM      NUMBER  OF
  YR/DAY      YEAR       YEAR        TYPE       AREA    UNITS CD     CODE    RUR %        TOTAL      COORDINATES      POLLUTANTS
  ------------------------------------------------------------------------------------------------------------------------------
  79/303       79         83           A       137.59      12                   50       101,234          2                 16

                                                              UTM  COORDINATES
  01  HORIZ    VERT      02  HORIZ    VERT      03  HORIZ    VERT      04  HORIZ    VERT      05  HORIZ    VERT      06  HORIZ    VERT
  ----------------      ----------------      ----------------      ----------------      ----------------      ----------------
  18  530.0  4310.0     18  535.1  4320.1

       SULFUR  CONTENTS            ASH  CONTENTS             GAS FUEL           DIESEL FUEL                MOTOR   VEHICLE   MILES
ANTH    BITUM    DIST   RESID'L    ANTH      BITUM           VEHICLES            VEHICLES    LIMITED ACCESS   RURAL     SUB  URBAN     URBAN
COAL    COAL     OIL    OIL        COAL       COAL        LIGHT       HEAVY        HEAVY          ROADS        ROADS       ROADS        ROADS
---------------------------------  --------------     ------------------      -----------  ---------------------------------------------------

  FLAG    EIS    FLAGS                            SIP ESTIMATES
NEDS A1  1 2 3 4 5 6          TSP        SO2         NOX          HC            CO
-------  -----------     -------------------------------------------------------------
   S     S S S S S S          125        137          12        3,459          119

      ***     POLLUTANT                        ATTAINMENT     AQMA     EIS      ***    POLLUTANT                        ATTAINMENT    AQMA     EIS     ***
      ***   ID       NAME                        STATUS      NUMBER    F 7      ***   ID       NAME                       STATUS      NUMBER    F 7     ***
      -----------------------------------------------------------------------------------------------------------------------------------------------------
      ***   42601    NO                             U        000123     S       ***   42602    NO2                          A         000123     S      ***
      ***   11114    WINDBLN PART                   U        000123     S       ***   21101    TOTAL DUSTFALL               A         000123     S      ***
      ***   44101    TOTAL OXIDANTS                 U        000123     S       ***   44201    OZONE                        A         000123     S      ***
      ***   42101    CO                             U        000123     S       ***   42102    CO2                          A         000123     S      ***
      ***   42603    NOX                            U        000123     S       ***   43101    HC                           A         000123     S      ***
      ***   43102    NONMETH HC                     U        000123     S       ***   43502    FORMALDEHYDE                 A         000123     S      ***
      ***   11101    TSP                            U        000123     S       ***   11103    BENZENE ORGNICS              A         000123     S      ***
      ***   42401    SO2                            U        000123     S       ***   42402    HYDROGEN SULFDE              A         000123     S      ***
```

Figure AST17-2 - continued. Sample Output (Page 4 of 6)

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```
                              AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                            FILE LISTING                                                PAGE    2

****************
**CATEGORY 100**        STATE     COUNTY     AQCR     GEOG SUBALLOC #     CATEGORY #     CATEGORY DISAG #     BATCH
****************        ------------------------------------------------------------------------------------------
                          31       0015      011          00135              100               10              0

RECORD    RECORD       CATEGORY                              CATEGORY       PROCESS       UNITS                  NORMAL OPERATING    THRUPUT
 YEAR      TYPE       DESCRIPTION                           ADJUSTMENT       RATE      CODE   DESCRIPTION        HR/D D/WK  WK/YR      RATIO
--------------------------------------------------------------------------------------------------------------------------------------------
 1979      SD         CAT 100 DISAG 10                          23             125                                 24    7     52        1.3

    UNIFORM                       MONTHLY THRUPUT PERCENTAGES                                    PERCENTAGES OF              HEAT
    THRUPUT   JAN    FEB   MAR   APR   MAY   JUN   JUL   AUG   SEP   OCT   NOV   DEC      NITROGEN    SULFUR     ASH      CONTENT
    ---------------------------------------------------------------------------------     ---------------------------------------
      YES      8      8     9     8     8     9     8     8     9     8     8     9          .013       5.1      10.2      0034

  UNIFORM                                                 HOURLY THRUPUT PERCENTAGES
  THRUPUT  0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
  --------------------------------------------------------------------------------------------------------------------------------
   YES       4    4    4    4    4    5    4    4    4    4    4    5    4    4    4    4    4    5    4    4    4    4    4    5

MAX HRLY   DATA CONF        EIS FLAG     NEDS     NEDS A7                                   INFORMATION SOURCE                NUMBER OF
THRUPUT     RATING         1  2  3  4    FLAG   FLAG  COMMENT                              CODE       NARRATIVE               POLLUTANTS
---------  ---------     --------------  -----  ---------------------------------------   ------------------------------    ----------
               1           S  S  S  S      S      S                                        L        LOCAL GOVRNMT                16

  POLLUTANT                      POLLUTANT       EMISSION       EM FAC      EM FAC  EM FAC   EMISSIONS    NEDS A7   MAX HOURLY     CONF   FLAG
  ID     NAME                  SPECIFIC DATA      FACTOR       CONF RTNG    SOURCE  ORIGIN   ESTIMATES   EMISSION   MAX HOURLY     RTNG   EIS S
  --------------------         ------------      --------      ---------    ------  ------   ---------   --------   ----------     ----------
11101  ISP                       1234               26.100         5          A       I           383                                3      S
11103  BENZENE ORGANICS                          1,201.449         5          A       I         1,727                                3      S
11114  AINCBLN PART                              1,241.198         5          A       L         1,784                                3      S
21101  TOTAL DUSTFALLS                           2,301.449         5          A       L         3,306                                3      S
22306  NITRATES                                  1,241.196         5          A       L         1,784                                3      S
22403  ISULFATES                                 2,316.449         5          A       L         3,330                                3      S
42101  CO                                        1,243.398         5          A       I         1,787                                3      S
42102  CO2                                       2,317.749         5          A       L         3,332                                3      S
42401  SO2                                       1,201.396         5          A       I         8,808                                3      S
42402  HYDROGEN SULFDE                           2,000.749         5          A       I         2,876                                3      S
42601  NO                        J/112-A         1,201.998         5          A       L         1,726                                3      S
42602  NO2                       S-JJJJ-55       4,300.744         5          A       L            86                                3      S
42603  NOX                       J/1188A         1,201.736         5          A       L         1,727                                3      S
43101  HC                        S-JJJ5555      33,322.749         5          A       L        47,901                                3      S
43102  NONMETH HC                                1,201.446         5          A       L         1,727                                3      S
43502  FORMALYHYDE               S-JJJ5555       4,200.744         5          A       L         6,034                                3      S
```

Figure AST17-2 - continued. Sample Output
(Page 5 of 6)

```
                                   AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                 FILE LISTING                                                    PAGE     3

****************
**CATEGORY 999**           STATE      COUNTY      AQCR      GEOG SUBALLOC #      CATEGORY #      CATEGORY DISAG #      BATCH
****************           -------------------------------------------------------------------------------------------------
                             31        0015                      00135               999                00             0

RECORD    RECORD        CATEGORY                         CATEGORY        PROCESS          UNITS                 NORMAL OPERATING     THRUPUT
 YEAR      TYPE       DESCRIPTION                       ADJUSTMENT        RATE       CODE   DESCRIPTION         HR/D D/WK  WK/YR      RATIO
-------------------------------------------------------------------------------------------------------------------------------------------
           CA

   UNIFORM                        MONTHLY THRUPUT PERCENTAGES                                      PERCENTAGES OF            HEAT
   THRUPUT    JAN    FEB    MAR    APR    MAY    JUN    JUL    AUG    SEP    OCT    NOV    DEC       NITROGEN    SULFUR     ASH     CONTENT
   -----------------------------------------------------------------------------------------------    -------------------------------------
     YES

  UNIFORM                                                      HOURLY THRUPUT PERCENTAGES
  THRUPUT  0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
  ----------------------------------------------------------------------------------------------------------------------------------
   YES

MAX HRLY   DATA CONF         EIS FLAG     NEDS    NEDS A7                                            INFORMATION SOURCE             NUMBER OF
 THRUPUT    RATING          1  2  3  4    FLAG   FLAG  COMMENT                                       CODE      NARRATIVE            POLLUTANTS
---------  ---------       -------------------  -----------------------------------------------   ---------------------------     ----------
                            S  S  S  S     S       S                                                                                    1

  POLLUTANT                  POLLUTANT        EMISSION       EM FAC      EM FAC  EM FAC    EMISSIONS      NEDS A7   MAX HOURLY      CONF   FLAG
  ID    NAME               SPECIFIC DATA       FACTOR       CONF RTNG    SOURCE  ORIGIN    ESTIMATES     EMISSION   MAX HOURLY      RTNG  EIS 5
-------------------------  -------------     --------     ---------    ------  ------    ---------     --------   ----------     ----------
                                                                                                                                           S
```

Figure AST17-2 - continued. Sample Output

(Page 6 of 6)

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EIS/AS Test 18 - Ad Hoc

Produce a Quick Look Report for County Data

In this test run, county data is extracted from the master file and listed in a formatted report using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

The user-supplied quick look control cards are edited by CRTQLED (EC0160). As these cards are edited, CRTQLED (EC0160) builds two temporary control files; an extract control file which is passed to CRTQLEX (EC0170) and a report control file which is passed to CRPQUIK (EC0180). The extract control file contains the selection criteria needed by CRTQLEX (EC0170) to extract data from the master file. The report control file contains the information which determines the format of the report printed by CRPQUIK (EC0180). An EIS/AS master file is input to CRTQLEX (EC0170) from which data is selected according to the criteria contained in the extract control file passed from CRTQLED (EC0160). When data is extracted from the master file, it is written to a temporary file which is passed to CRPQUIK (EC0180). The data in this temporary file is printed in a report according to the format specifications contained in the report control file which is passed from CRTQLED (EC0160).

The control cards input to CRTQLED (EC0160) must conform to specific formats. See Figure AST18-1 for a description of the control card formats and Figure AST18-2 for definitions of the control card fields. Figure AST18-3 contains the data element names and their vaild abbreviations that may be coded on the control cards; Figure AST18-4 shows the EIS/AS quick look retrieval load sheet.

The run stream for this test run contains the JCL needed to execute the quick look package. The purpose of this test run is to create a report containing the fuel process rates for categories 1 through 64 in each county. Data will be extracted only when the fuel process rate field of a category record is non-blank. A page break is specified on the county (CNTY) field and for each page break a subtotal of the number of categories in the county will be printed. A total of the number of quick look lines will be printed at the end of the report. In this test run, the total number of quick look lines is equivalent to the total number of categories listed for each county. The run stream for this test run is shown in Figure AST18-5.

A substitutable parameter is used to specify the name of the master file input to CRTQLEX (EC0170). The name of the master file is ECMSTR7 (created in Test 9). The DD (data definition) information for the control cards input to CRTQLED (EC0160) is also supplied. Sample output produced by this run stream is shown in Figure AST18-6.

$$SELECT Card

Column #	Field Length	Data Type	Description
1 - 8	8	Alphanumeric	$$SELECT
9	1		Unused
10 - 72	63	Alphanumeric	Report Title
73 - 80	8	Alphanumeric	Date

(Page 1 of 8)

Figure AST18-1. Quick Look Control Card Formats

10 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	10
3	1		Unused
4	1	Alphanumeric	Left Parenthesis
5	1		Unused
6 - 9	4	Alphanumeric	Data Element Abbreviation
10	1		Unused
11	1	Alphanumeric	Relational Operator
12	1		Unused
13 - 24	12	Alphanumeric	Test Value
25	1		Unused
26	1	Alphanumeric	Right Parenthesis
27	1		Unused
28 - 30	3	Alphabetic	Boolean Operator
31 - 80	50		Unused

(Page 2 of 8)

Figure AST18-1 - continued. Quick Look Control Card Formats

20 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	20
3	1		Unused
4 - 5	2	Alphabetic	Report Type
6 - 80	75		Unused

(Page 3 of 8)

Figure AST18-1 - continued. Quick Look Control Card Formats

30 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	30
3	1		Unused
4 - 7	4	Alphanumeric	Data Element Abbreviation
8	1	Alphabetic	Page Break/Subtotaling Request
9	1		Unused
10 - 15	6		Repeat Columns 4-9
16 - 21	6		Repeat Columns 4-9
22 - 27	6		Repeat Columns 4-9
28 - 33	6		Repeat Columns 4-9
34 - 39	6		Repeat Columns 4-9
40 - 80	41		Unused

(Page 4 of 8)

Figure AST18-1 - continued. Quick Look Control Card Formats

40 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	40
3	1		Unused
4 - 7	4	Alphanumeric	Data Element Abbreviation
8	1	Alphabetic	Summation Request
9	1		Unused
10 - 15	6		Repeat Columns 4-9
16 - 21	6		Repeat Columns 4-9
22 - 27	6		Repeat Columns 4-9
28 - 33	6		Repeat Columns 4-9
34 - 39	6		Repeat Columns 4-9
40 - 45	6		Repeat Columns 4-9
46 - 51	6		Repeat Columns 4-9
52 - 57	6		Repeat Columns 4-9
58 - 63	6		Repeat Columns 4-9
64 - 80	17		Unused

(Page 5 of 8)

Figure AST18-1 - continued. Quick Look Control Card Formats

50 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	50
3	1		Unused
4 - 7	4	Alphanumeric	Data Element Abbreviation
8	1		Unused
9 - 13	5		Repeat Columns 4-8
14 - 18	5		Repeat Columns 4-8
19 - 23	5		Repeat Columns 4-8
24 - 28	5		Repeat Columns 4-8
29 - 33	5		Repeat Columns 4-8
34 - 38	5		Repeat Columns 4-8
39 - 80	42		Unused

(Page 6 of 8)

Figure AST18-1 - continued. Quick Look Control Card Formats

51 Card

Column #	Field Length	Data Type	Description
1 - 2	2	Numeric	51
3	1		Unused
4 - 8	5	Numeric	Pollutant ID
9	1		Unused
10 - 15	6		Repeat Columns 4-9
16 - 21	6		Repeat Columns 4-9
22 - 27	6		Repeat Columns 4-9
28 - 33	6		Repeat Columns 4-9
34 - 39	6		Repeat Columns 4-9
40 - 80	41		Unused

(Page 7 of 8)

Figure AST18-1 - continued. Quick Look Control Card Formats

$$END Card

Column #	Field Length	Data Type	Description
1 - 5	5	Alphanumeric	$$END
6 - 80	75		Unused

(Page 8 of 8)

Figure AST18-1 - continued. Quick Look Control Card Formats

Boolean Operator: Used to combine type 10 cards.
Card Type: 10
Valid Codes: AND, OR
Field Length: 3 characters

Data Element Abbreviation: A four-character abbreviation for a data element in the EIS/AS master file.
Card Type: 10, 30, 40, 50
Valid Codes: Valid abbreviations are shown in Figure AST18-3. Abbreviations that are not allowed on the 10 card or 30 card are designated by ** under the heading 10/30 Card.
Field Length: 4 characters

Date: A date to appear on each page of the quick look report or pollutant summary report.
Card Type: $$SELECT
Valid Codes: This field is not edited, but it is recommended that the date be entered as MM/DD/YY where MM, DD, and YY are the month, day, and year, respectively.
Field Length: 8 characters

Left Parenthesis: Used in conjunction with a right parenthesis to group type 10 cards.
Card Type: 10
Valid Codes: (or blank
Field Length: 1 character

(Page 1 of 4)

Figure AST18-2. Quick Look Control Card Field Descriptions

Page Break/Subtotaling Request: Used to request a page break in the quick look report when the value of the associated data element changes. Also, if totaling is requesting on the 40 card, subtotals will be generated with each page break.

Card Type: 30
Valid Codes: X - page break/subtotaling requested
blank - page break/subtotaling not requested
Field Length: 1 character

Pollutant ID: Identifies pollutants for which emissions estimates are to be included in the pollutant summary report.

Card Type: 51
Valid Codes: 11101 - Total Suspended Particulate
42101 - Carbon Monoxide
42401 - Sulfur Dioxide
42601 - Nitric Oxide
42602 - Nitrogen Dioxide
42603 - Oxides of Nitrogen
43101 - Hydrocarbons
Field Length: 5 characters

Relational Operator: Specifies a comparison to be made between a data element in the master file and the test value.

Card Type: 10
Valid Codes: E - Equal to
U - Unequal
G - Greater than or equal to
L - Less than or equal to

(Page 2 of 4)

Figure AST18-2 - continued. Quick Look Control Card Field Descriptions

P - Present, any entry
B - Blank
Field Length: 1 character

Report Title: A title to appear on each page of the quick look report or pollutant summary report.
Card Type: $$SELECT
Field Length: 63 characters

Report Type: Specifies whether a quick look report or a pollutant summary report is to be produced.
Card Type: 20 card
Valid Codes: QL - Quick look report
SU - Pollutant summary report
Field Length: 2 characters

Right Parenthesis: Used in conjunction with a left parenthesis to group type 10 cards.
Card Type: 10
Valid Codes:) or blank
Field Length: 1 character

Summation Request: Used to request totals for data elements in the quick look report. If a page break/subtotaling request is entered on the 30 card, a summation request will also cause subtotals to be generated at each page break for those data elements for which a summation request is entered.

(Page 3 of 4)

Figure AST18-2 - continued. Quick Look Control Card Field Descriptions

Card Type: 40
Valid Codes: X - summation requested
Blank - summation not requested
Field Length: 1 character

Test Value: Specifies a value against which the associated data element in the master file is compared.

Card Type: 10
Valid Codes: Valid codes for this field depend upon the associated data element. The test value should be entered with a format that corresponds to the format of the data element in the master file.
Field Length: Variable, no more than 12 characters. Refer to Figure AST18-3.

(Page 4 of 4)

Figure AST18-2 - continued. Quick Look Control Card Field Descriptions

Description Record Data Elements

		Data Element Length		
Data Element Name	Abbreviation	10/30 Card	40/50 Card	40 Card If Totaled
State	STTE	2	N/A	
County	CNTY	4	5	
AQCR	AQCR	3	5	
Geographic Suballocation Number	GSUB	5	6	
Category Number	CATN	3	5	
Category Disaggregation Number	DISA	2	5	
Year	YEAR	2	5	
Day	DAYJ	3	5	
Air Basin	BASN	3	5	
SMSA	SMSA	4	5	
Area Name*	ANME	20	21	
Major Activity*	MACT	20	21	
Associated Plant ID	PLID	4	5	
SIP Base Year	SIPY	2	5	
Projected Year	PRJY	2	5	
Rural Population Percentage	RPPC	2	5	
Population	POPN	8	9	14
AQCR Name*	AQNM	54	55	
Suballocation Technique Code	SATC	2	5	
Suballocation Technique Description	SATD	**	21	
Defined Area Code	DFAC	3	5	

---

*Only the first 12 characters are used in selection

**Not valid on a 10 card or a 30 card

N/A Not allowed

(Page 1 of 8)

Figure AST18-3. Data Element Abbreviations and Lengths

Description Record Data Elements (continued)

Data Element Name	Abbreviation	Data Element Length 10/30 Card	40/50 Card	40 Card If Totaled
Sulfur Content - Anthracite Coal	SUAC	2	5	
Sulfur Content - Bituminous Coal	SUBC	2	5	
Sulfur Content - Distillate Oil	SUDO	2	5	
Sulfur Content - Residual Oil	SURO	2	5	
Ash Content - Anthracite Coal	ASHA	3	5	
Ash Content - Bituminous Coal	ASHB	3	5	
Number of UTM Coordinates	NUTM	1	N/A	
UTM Zone 1	UTZ1	2	5	
UTM Horizontal 1	UTH1	4	6	
UTM Vertical 1	UTV1	5	7	
UTM Zone 2	UTZ2	2	5	
UTM Horizontal 2	UTH2	4	6	
UTM Vertical 2	UTV2	5	7	
UTM Zone 3	UTZ3	2	5	
UTM Horizontal 3	UTH3	4	6	
UTM Vertical 3	UTV3	5	7	
UTM Zone 4	UTZ4	2	5	
UTM Horizontal 4	UTH4	4	6	
UTM Vertical 4	UTV4	5	7	
UTM Zone 5	UTZ5	2	5	
UTM Horizontal 5	UTH5	4	6	
UTM Vertical 5	UTV5	5	7	

N/A Not allowed

(Page 2 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Description Record Data Elements (continued)

Data Element Name	Abbreviation	Data Element Length 10/30 Card	 40/50 Card	 40 Card If Totaled
UTM Zone 6	UTZ6	2	5	
UTM Horizontal 6	UTH6	4	6	
UTM Vertical 6	UTV6	5	7	
Source Type	TYSO	1	5	
Length or Area	LNGL	7	9	
Units Code for Length or Area	LNGA	2	5	
TSP SIP Estimate	ETSP	5	6	11
SO_2 SIP Estimate	ESO2	4	5	10
NO_x SIP Estimate	ENOX	4	5	10
HC SIP Estimate	ESHC	5	6	11
CO SIP Estimate	ESCO	5	6	11
Population Code	POPC	1	5	
Gas Fuel for Light Vehicles	GASL	7	8	13
Gas Fuel for Heavy Vehicles	GASH	6	7	12
Diesel Fuel for Heavy Vehicles	DESH	6	7	12
Motor Vehicle Miles for Limited Access Roads	VMLA	6	7	12
Motor Vehicle Miles for Rural Roads	VMRR	6	7	12
Motor Vehicle Miles for Suburban Roads	VMSR	6	7	12
Motor Vehicle Miles for Urban Roads	VMUR	7	8	13
Number of Pollutants	NPLD	2	5	

(Page 3 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Description Record Pollutant-Specific Data Elements

		Data Element Length		
Data Element Name	Abbreviation	10/30 Card	40/50 Card	40 Card If Totaled
Pollutant ID (Description Record)	PLTD	5	6	
Pollutant Name (Description Record)	PNMD	**	16	
Attainment Status	ATTN	1	5	
AQMA Number	AQNO	6	7	

** Not valid on a 10 card or a 30 card

(Page 4 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Category Record Data Elements

Data Element Name	Abbreviation	Data Element Length 10/30 Card	40/50 Card	40 Card If Totaled
Category Description	CATD	**	26	
Year of Information	INYR	2	5	
Process Rate	PROR	9	10	
Category Adjustment Value	CATA	7	8	
Units Code	UNTC	2	5	
Units Code Description	UNTD	**	13	
Uniform Thruput	UNTP	1	5	
January Thruput	JATP	2	5	
February Thruput	FETP	2	5	
March Thruput	MRTP	2	5	
April Thruput	APTP	2	5	
May Thruput	MATP	2	5	
June Thruput	JNTP	2	5	
July Thruput	JLTP	2	5	
August Thruput	AUTP	2	5	
September Thruput	SETP	2	5	
October Thruput	OCTP	2	5	
November Thruput	NOTP	2	5	
December Thruput	DETP	2	5	
Hours per Day	HRDY	2	5	
Days per Week	DYWK	1	5	

** Not valid on a 10 card or a 30 card

(Page 5 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Category Record Data Elements (continued)

Data Element Name	Abbreviation	Data Element Length 10/30 Card	 40/50 Card	 40 Card If Totaled
Weeks per Year	WKYR	2	5	
Thruput Ratio	RATP	4	6	
Maximum Hourly Thruput	MHTP	10	11	
Data Confidence Rating	CONF	1	5	
Nitrogen Content	NITP	3	5	
Sulfur Content	SULP	2	5	
Ash Content	ASHP	3	5	
Heat Content	HTCT	4	5	
Uniform Hourly Thruput	UHTP	1	5	
Thruput for Hour Beginning 0000	00TP	2	5	
Thruput for Hour Beginning 0100	01TP	2	5	
Thruput for Hour Beginning 0200	02TP	2	5	
Thruput for Hour Beginning 0300	03TP	2	5	
Thruput for Hour Beginning 0400	04TP	2	5	
Thruput for Hour Beginning 0500	05TP	2	5	
Thruput for Hour Beginning 0600	06TP	2	5	
Thruput for Hour Beginning 0700	07TP	2	5	
Thruput for Hour Beginning 0800	08TP	2	5	
Thruput for Hour Beginning 0900	09TP	2	5	
Thruput for Hour Beginning 1000	10TP	2	5	
Thruput for Hour Beginning 1100	11TP	2	5	
Thruput for Hour Beginning 1200	12TP	2	5	
Thruput for Hour Beginning 1300	13TP	2	5	

(Page 6 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Category Record Data Elements (continued)

Data Element Name	Abbreviation	Data Element Length 10/30 Card	40/50 Card	40 Card If Totaled
Thruput for Hour Beginning 1400	14TP	2	5	
Thruput for Hour Beginning 1500	15TP	2	5	
Thruput for Hour Beginning 1600	16TP	2	5	
Thruput for Hour Beginning 1700	17TP	2	5	
Thruput for Hour Beginning 1800	18TP	2	5	
Thruput for Hour Beginning 1900	19TP	2	5	
Thruput for Hour Beginning 2000	20TP	2	5	
Thruput for Hour Beginning 2100	21TP	2	5	
Thruput for Hour Beginning 2200	22TP	2	5	
Thruput for Hour Beginning 2300	23TP	2	5	
Information Source Code	ICSO	1	5	
Information Source Narrative	INSO	**	21	
Number of Pollutants	NPLC	2	5	

** Not valid on a 10 card or 30 card

(Page 7 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Category Record Pollutant-Specific Data Elements

Data Element Name	Abbreviation	Data Element Length 10/30 Card	40/50 Card	40 Card If Totaled
Pollutant ID (Category Record)	PLTC	5	6	
Emission Factor	EFAC	10	12	
Emission Factor Confidence Rating	EFCR	1	5	
Emission Factor Source Code	EFSC	1	5	
Emission Factor Origin	EFOR	1	5	
Pollutant-Specific Data	SIZE	10	11	
NEDS A7 Emission	A7EM	7	8	
Pollutant Name (Category Record)	PNMC	**	16	
Emissions Estimate	EEST	7	8	13
Confidence Rating	CNFR	1	5	
Maximum Hourly Emission	MHRE	6	7	12

** Not valid on a 10 card or a 30 card

(Page 8 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

EIS/AS QUICK LOOK RETRIEVAL

NAME

DATE

	REPORT TITLE		
1 8	10 72	73 80	
$$SELECT		/ /	

SELECTION CRITERIA

	(	DATA ABBR	REL OP	VALUE	)	AND/OR
1 2	4	6 9	11	13 24	26	28 30
10						
10						
10						
10						
10						
10						
10						
10						
10						
10						

	(	DATA ABBR	REL OP	VALUE	)	AND/OR
1 2	4	6 9	11	13 24	26	28 30
10						
10						
10						
10						
10						
10						
10						
10						
10						
10						

RELATIONAL OPERATORS:

E – EQUAL
U – UNEQUAL
G – GREATER THAN
L – LESS THAN
P – PRESENT
B – BLANK

AND/OR MUST BE BLANK ON LAST 10 CARD

REPORT TYPE

	RPT CODE
1 2	4 5
20	

REPORT CODES:
SU – POLLUTANT SUMMARY REPORT
QL – QUICK LOOK REPORT

REPORT ORDER

	DATA ABBR	X	DATA ABBR	X	DATA ABBR	X	DATA ABBR	X	DATA ABBR	X	DATA ABBR	X
1 2	4 7	8	10 13	14	16 19	20	22 25	26	28 31	32	34 37	38
30												

ENTER DATA ABBREVIATIONS LEFT TO RIGHT
ENTER X FOR PAGE BREAK/SUBTOTALLING

QUICK LOOK REPORT FORMAT

	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT	DATA ABBR	TOT
1 2	4 7	8	10 13	14	16 19	20	22 25	26	28 31	32	34 37	38	40 43	44	46 49	50	52 55		58 61	62
40																				

ENTER X FOR TOTALS

POLLUTANT SUMMARY REPORT FORMAT

	DATA ABBR	DATA ABBR	DATA ABBR	DATA ABBR	DATA ABBR	DATA ABBR	DATA ABBR
1 2	4 7	9 12	14 17	19 22	24 27	29 32	34 37
50							

POLLUTANT SUMMARY REPORT POLLUTANTS

	POLLUTANT ID	POLLUTANT ID	POLLUTANT ID	POLLUTANT ID	POLLUTANT ID	POLLUTANT ID
1 2	4 8	10 14	16 20	22 26	28 32	34 38
51						

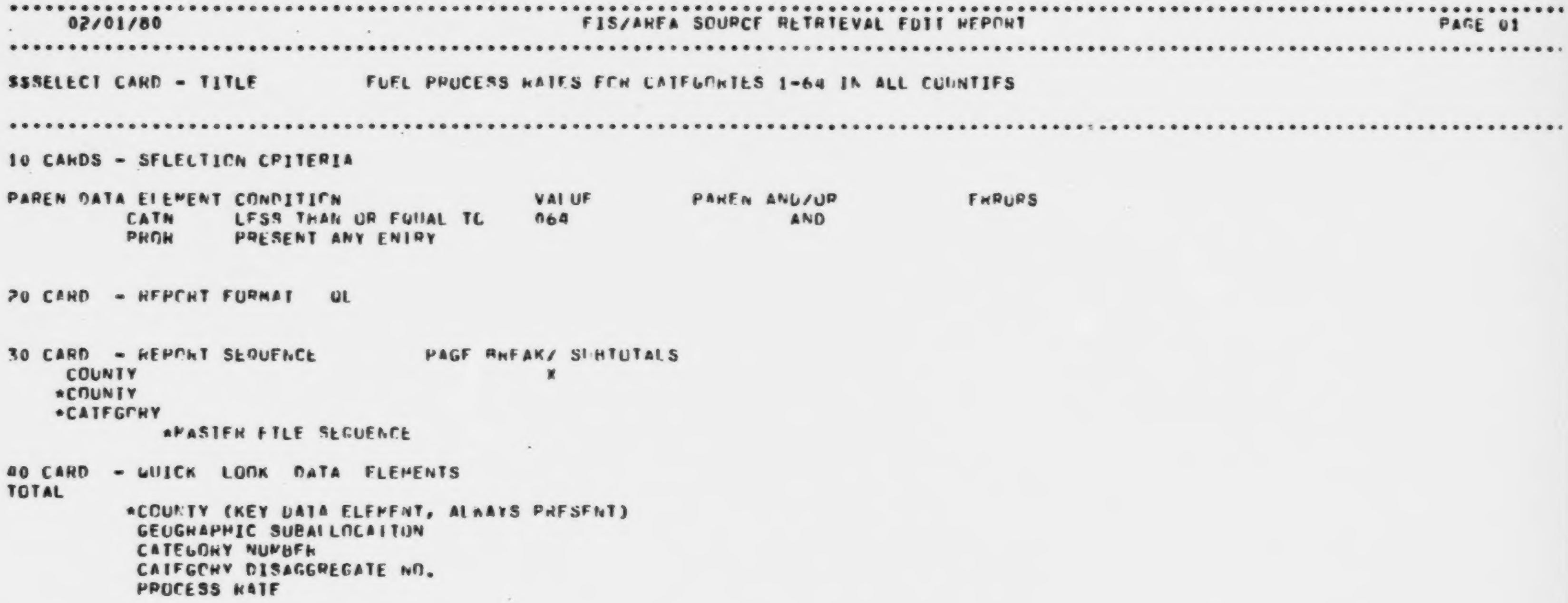
1 5
$$END

Figure AST18-4. EIS/AS Quick Look Retrieval Load Sheet

BEST DOCUMENT AVAILABLE

```
//ASTEST18 JOB    (ACCOUNTING INFO)
//*
//*   EXECUTE A QUICK LOOK REPORT FOR COUNTY DATA
//*
//TEST18A EXEC ECRPM00,
//        MSTRFIL=ECMSTR7
//*
//*   CREATE A REPORT CONTAINING THE FUEL PROCESS RATES FOR
//*   CATEGORIES 1 THROUGH 64 IN EACH COUNTY
//*
//EDIT.INPUT DD *
$$SELECT      FUEL PROCESS RATES FOR CATEGORIES 1-64 IN ALL COUNTIES     02/01/80
10   CATN L 064             AND
10   PROR P
20 UL
30 CNTYX
40 GSUB  CATN  UTSA  PROR
$$END
```

Figure AST18-5. Run Stream



```
*************************************************************************************************************************
    02/01/80                                          FIS/AREA SOURCE RETRIEVAL EDIT REPORT                           PAGE 01
*************************************************************************************************************************

$$SELECT CARD - TITLE         FUEL PROCESS RATES FOR CATEGORIES 1-64 IN ALL COUNTIES

*************************************************************************************************************************

10 CARDS - SELECTION CRITERIA

PAREN DATA ELEMENT CONDITION                  VALUE          PAREN AND/OR              ERRORS
         CATN     LESS THAN OR EQUAL TO     064                      AND
         PROR     PRESENT ANY ENTRY


20 CARD  - REPORT FORMAT   QL


30 CARD  - REPORT SEQUENCE          PAGE BREAK/ SUBTOTALS
     COUNTY                                     X
    *COUNTY
    *CATEGORY
             *MASTER FILE SEQUENCE

40 CARD  - QUICK  LOOK  DATA  ELEMENTS
TOTAL
         *COUNTY (KEY DATA ELEMENT, ALWAYS PRESENT)
          GEOGRAPHIC SUBALLOCAITON
          CATEGORY NUMBER
          CATEGORY DISAGGREGATE NO.
          PROCESS RATE
```

Figure AST18-6. Sample Output

(Page 1 of 6)

```
PROGRAM NAME: CRTWLEX (ECC170)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

                                                               RETRIEVAL EXTRACT REPORT

     02/01/80                                                   ETS-AREA SOURCE

************************************************************************************************************************

     NUMBER OF RECORDS READ              371
     NUMBER OF RECORDS WRITTEN           191

          CONTINUING WITH RETRIEVAL
```

Figure AST18-6 - continued. Sample Output (Page 2 of 6)

```
RUN DATE 02/01/80                          SOUTH CAROLINA                                    PAGE   1
                                          EIS/AREA SOURCE
                                         QUICK LOOK REPORT

                              FUEL PROCESS RATES FOR CATEGORIES 1-68 IN ALL COUNTIES

COUN GEOGR CATG DIS- PROCESS
TY   SUBAL NO.  AGGR RATE
..........................................................................................................
0680 00000 002  00   000000005
0680 00000 003  00   000000099
0680 00000 005  00   000000013
0680 00000 006  00   000000089
0680 00000 008  00   000000011
0680 00000 011  00   000000001
0680 00000 016  00   000000008
0680 00000 018  00   000000001
0680 00000 024  00   000000270
0680 00000 025  00   000000001
0680 00000 026  00   000000025
0680 00000 039  00   000001166
0680 00000 044  00   000000011
0680 00000 045  00   000000013
0680 00000 047  00   000000584
0680 00000 052  00   000000575
0680 00000 053  00   000000789
0680 00000 054  00   000000273
0680 00000 055  00   000015840
0680 00000 057  00   000114000
0680 00000 060  00   000000457
0680 00000 061  00   000002870

NUMBER OF RECORDS IN THIS CNTY IS     22
```

Figure AST18-6 - continued. Sample Output (Page 3 of 6)

```
RUN DATE 02/01/80                           SOUTH CAROLINA                                    PAGE   2
                                           EIS/AREA SOURCE
                                          QUICK LOOK REPORT

                       FUEL PROCESS RATES FOR CATEGORIES 1-64 IN ALL COUNTIES

COUN GEOGR CATG DIS- PROCESS
TY   SUBAL NO.  AGGR RATE
.................................................................................................................
1280 00000 001  00   000040123
1280 00000 002  00   000020010
1280 00000 003  00   000009750
1280 00000 004  00   000008900
1280 00000 005  00   000023550
1280 00000 006  00   000000050
1280 00000 007  00   000023500
1280 00000 008  00   000030750
1280 00000 009  00   000042100
1280 00000 010  00   000000390
1280 00000 011  00   000008750
1280 00000 012  00   000000005
1280 00000 013  00   000098750
1280 00000 014  00   000123400
1280 00000 015  00   000009650
1280 00000 016  00   000021500
1280 00000 017  00   000000980
1280 00000 018  00   000056900
1280 00000 019  00   000000025
1280 00000 020  00   000002350
1280 00001 001  00   000059850
1280 00001 001  01   000059850
1280 00001 001  35   000059850
1280 00001 001  99   000059850
1280 00500 001  01   000059850
1280 00500 001  22   000059850
1280 00500 001  70   000059850
1280 99999 001  99   000059850

NUMBER OF RECORDS IN THIS CNTY IS     28
```

Figure AST18-6 - continued. Sample Output

(Page 4 of 6)

```
RUN DATE 02/01/80                                    SOUTH CAROLINA                                             PAGE   3
                                                    EIS/AREA SOURCE
                                                   QUICK LOOK REPORT

                                   FUEL PROCESS RATES FOR CATEGORIES 1-60 IN ALL COUNTIES

COUN GEOGR CATG DIS- PROCESS
TY   SUBAL NO.  AGGR RATE
.............................................................................................................................
1380 00000 002  00   000000013
1380 00000 003  00   000000273
1380 00000 006  00   000000052
1380 00000 008  00   000000016
1380 00000 009  00   000000001
1380 00000 010  00   000000002
1380 00000 011  00   000000019
1380 00000 016  00   000000035
1380 00000 018  00   000000007
1380 00000 024  00   000000233
1380 00000 025  00   000000002
1380 00000 026  00   000000024
1380 00000 039  00   000001199
1380 00000 044  00   000000011
1380 00000 045  00   000000018
1380 00000 047  00   000000511
1380 00000 052  00   000000076
1380 00000 053  00   000001700
1380 00000 054  00   000000218
1380 00000 055  00   000019404
1380 00000 057  00   000152000
1380 00000 060  00   000000207
1380 00000 061  00   000009405

NUMBER OF RECORDS IN THIS CNTY IS     23
```

Figure AST18-6 - continued. Sample Output

(Page 5 of 6)

```
RUN DATE 02/01/80                              SOUTH CAROLINA                                    PAGE   9
                                              EIS/AREA SOURCE
                                             QUICK LOOK REPORT

                          FUEL PROCESS RATES FOR CATEGORIES 1-64 IN ALL COUNTIES

COUN GEOGR CATG DIS- PROCESS
TY   SUBAL NO.  AGGR RATE
.................................................................................................................
7860 00000 001  00   000000001
7860 00000 002  00   000000081
7860 00000 003  00   000000183
7860 00000 005  00   000000096
7860 00000 008  00   000000004
7860 00000 009  00   000000034
7860 00000 010  00   000000045
7860 00000 011  00   000000025
7860 00000 014  00   000000281
7860 00000 016  00   000000062
7860 00000 017  00   000000170
7860 00000 018  00   000000023
7860 00000 021  00   000001467
7860 00000 039  00   000001184
7860 00000 044  00   000000003
7860 00000 045  00   000000314
7860 00000 047  00   000000767
7860 00000 052  00   000000066
7860 00000 053  00   000000567
7860 00000 054  00   000000207
7860 00000 055  00   000000030
7860 00000 057  00   000000167
7860 00000 058  00   000000285
7860 00000 059  00   000000649
7860 00000 064  00   000000080

NUMBER OF RECORDS IN THIS CNTY 18     25


TOTAL NUMBER OF QUICK LOOK LINES EQUALS    191
```

Figure AST18-6 - continued. Sample Output (Page 6 of 6)

EIS/AS Test 19 - Ad Hoc

Produce a Quick Look Report for Particulate Emissions

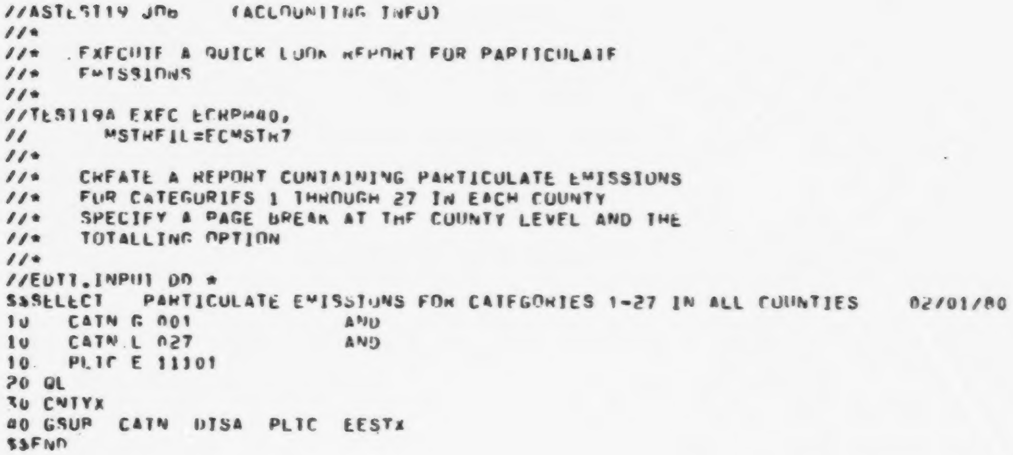
In this test run, a report containing particulate emissions is generated using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

CRTQLED (EC0160) edits user-supplied control cards and creates two temporary control files; an extract control file which is passed to CRTQLEX (EC0170), and a report control file which is passed to CRPQUIK (EC0180). See EIS/AS Test 18 for a discussion of these programs and files.

The run stream for this test run contains the JCL needed to execute the quick look package. The purpose of this test run is to create a report containing particulate emissions for categories 1 through 27 in each county. Since emissions estimate is a pollutant-related field, the pollutant code must be specified as part of the selection criteria in the user-supplied control cards (in this case the pollutant code is 11101).

A page break is specified at the county level and the totalling option has been specified for emissions estimates. Consequently, a subtotal of emissions estimates will be printed for each county (page break) and a final total of all emissions estimates contained in the report will be printed at the end of the report. The run stream for this test run is shown in Figure AST19-1.

A substitutable parameter is used to specify the name of the master file input to CRTQLEX (EC0170). The name of the master file is ECMSTR7 (created in Test 9). The DD (data definition) information for the control cards input to CRTQLED (EC0160) is also supplied. Sample output produced by this run stream is shown in Figure AST19-2.



```
//ASTEST19 JOB    (ACCOUNTING INFO)
//*
//*  .EXECUTE A QUICK LOOK REPORT FOR PARTICULATE
//*   EMISSIONS
//*
//TEST19A EXEC ECRPM40,
//       MSTRFIL=ECMSTR7
//*
//*   CREATE A REPORT CONTAINING PARTICULATE EMISSIONS
//*   FOR CATEGORIES 1 THROUGH 27 IN EACH COUNTY
//*   SPECIFY A PAGE BREAK AT THE COUNTY LEVEL AND THE
//*   TOTALLING OPTION
//*
//EDIT.INPUT DD *
$$SELECT   PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES    02/01/80
10   CATN G 001            AND
10   CATN L 027            AND
10   PLTC E 11101
20 QL
30 CNTYX
40 GSUP  CATN  DTSA  PLTC  EESTX
$$END
```

Figure AST19-1. Run Stream

```
................................................................................................................................
     02/01/80                                  FIS/AREA SOURCE RETRIEVAL EDIT REPORT                                    PAGE 01
................................................................................................................................
$$SELECT CARD - TITLE       PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

................................................................................................................................
10 CARDS - SELECTION CRITERIA

PAREN DATA ELEMENT CONDITION                VALUE        PAREN AND/OR             ERRORS
          CATN     GREATER THAN OR EQUAL TO 001                   AND
          CATN     LESS THAN OR EQUAL TO    027                   AND
          PLTC     EQUAL TO                 11101

20 CARD  - REPORT FORMAT   QL

30 CARD  - REPORT SEQUENCE         PAGE BREAK/ SUBTOTALS
     COUNTY                                  X
    *COUNTY
    *CATEGORY
             *MASTER FILE SEQUENCE

40 CARD  - QUICK  LOOK  DATA  ELEMENTS
TOTAL
          *COUNTY (KEY DATA ELEMENT, ALWAYS PRESENT)
           GEOGRAPHIC SUBALLOCATION
           CATEGORY NUMBER
           CATEGORY DISAGGREGATE NO.
           POLLUTANT ID - CATEGORY REC
  X        EMISSIONS ESTIMATES
```

Figure AST19-2. Sample Output (Page 1 of 6)

```
PROGRAM NAME: CNTWIEX (EC0170)
REVISION LEVEL: 1-80
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
                                                    RETRIEVAL EXTRACT REPORT

    02/01/80                                        EIS-AREA SOURCE

....................................................................................................

    NUMBER OF RECORDS READ              371
    NUMBER OF RECORDS WRITTEN           116

        CONTINUING WITH RETRIEVAL




--------------------------------------------------------------------------------------------------


 RUN DATE 02/01/80                              SOUTH CAROLINA                              PAGE    1
                                                EIS/AREA SOURCE
                                               QUICK LOOK REPORT

                                 PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT          EMISS
TY   SUBAL NO.  AGGR CATGY        ESTIM
....................................................................................................
0680 00000 002  00   11101        0000000
0680 00000 003  00   11101        0000000
0680 00000 004  00   11101        0000000
0680 00000 005  00   11101        0000000
0680 00000 006  00   11101        0000001
0680 00000 008  00   11101        0000000
0680 00000 011  00   11101        0000000
0680 00000 013  00   11101        0000000
0680 00000 016  00   11101        0000000
0680 00000 018  00   11101        0000000
0680 00000 024  00   11101        0000002
0680 00000 025  00   11101        0000000
0680 00000 026  00   11101        0000000
0680 00000 027  00   11101        0000000

SUBTOTAL
0680                                    3

NUMBER OF RECORDS IN THIS CNTY IS      14
```

Figure AST19-2 - continued. Sample Output

(Page 2 of 6)

```
RUN DATE 02/01/80                              SOUTH CAROLINA                                PAGE   2
                                              EIS/AREA SOURCE
                                             QUICK LOOK REPORT

                         PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT          EMISS
TY   SUBAL NO.  AGGR CATGY        ESTIM
.............................................................................................................
1280 00000 001  00   11101        0000000
1280 00000 002  00   11101        0000080
1280 00000 003  00   11101        0000015
1280 00000 004  00   11101        0000018
1280 00000 005  00   11101        0001830
1280 00000 006  00   11101        0000002
1280 00000 007  00   11101        0000353
1280 00000 008  00   11101        0000579
1280 00000 009  00   11101        0001263
1280 00000 010  00   11101        0000008
1280 00000 011  00   11101        0000044
1280 00000 012  00   11101        0000000
1280 00000 013  00   11101        0004385
1280 00000 014  00   11101        0000012
1280 00000 015  00   11101        0000030
1280 00000 016  00   11101        0000848
1280 00000 017  00   11101        0000048
1280 00000 018  00   11101        0001050
1280 00000 019  00   11101        0000001
1280 00000 020  00   11101        0000081

SUBTOTAL
1280                                10647

NUMBER OF RECORDS IN THIS CNTY IS      20
```

Figure AST19-2 - continued. Sample Output (Page 3 of 6)

```
RUN DATE 02/01/80                         SOUTH CAROLINA                                  PAGE   3
                                          EIS/AREA SOURCE
                                         QUICK LOOK REPORT

                            PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATE DIS- PLT         EMISS
TY   SUBAL NO.  AGGR CATGY       ESTIM
...........................................................................................................
1380 00000 002  00   11101       0000000
1380 00000 003  00   11101       0000000
1380 00000 006  00   11101       0000001
1380 00000 008  00   11101       0000000
1380 00000 009  00   11101       0000000
1380 00000 010  00   11101       0000000
1380 00000 011  00   11101       0000000
1380 00000 016  00   11101       0000000
1380 00000 016  00   11101       0000000
1380 00000 024  00   11101       0000002
1380 00000 025  00   11101       0000000
1380 00000 026  00   11101       0000000
1380 00000 027  00   11101       0000000

SUBTOTAL
1380                                   3

NUMBER OF RECORDS IN THIS CNTY IS     13
```

Figure AST19-2 - continued. Sample Output (Page 4 of 6)

```
RUN DATE 02/01/80                          SOUTH CAROLINA                                 PAGE    4
                                          EIS/AREA SOURCE
                                         QUICK LOOK REPORT

                    PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT         EMISS
TY   SUBAL NO.  AGGR CATGY       ESTIM
.....................................................................................................
1780 00000 002  00   11101       0000000
1780 00000 003  00   11101       0000000
1780 00000 005  00   11101       0000000
1780 00000 006  00   11101       0000001
1780 00000 008  00   11101       0000000
1780 00000 011  00   11101       0000000
1780 00000 016  00   11101       0000000
1780 00000 018  00   11101       0000000
1780 00000 024  00   11101       0000002
1780 00000 025  00   11101       0000000
1780 00000 026  00   11101       0000000
1780 00000 027  00   11101       0000000

SUBTOTAL
1780                                   3

NUMBER OF RECORDS IN THIS CNTY IS     12
```

```
RUN DATE 02/01/80                          SOUTH CAROLINA                                 PAGE    5
                                          EIS/AREA SOURCE
                                         QUICK LOOK REPORT

                    PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT         EMISS
TY   SUBAL NO.  AGGR CATGY       ESTIM
.....................................................................................................
2238 00000 023  00   11101       0000000

SUBTOTAL
2238                                   0

NUMBER OF RECORDS IN THIS CNTY IS      1
```

Figure AST19-2 - continued. Sample Output

(Page 5 of 6)

```
RUN DATE 02/01/80                         SOUTH CAROLINA                                PAGE   9
                                          EIS/AREA SOURCE
                                         QUICK LOOK REPORT

                      PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT        EMISS
TY   SUBAL NO.  AGGR CATGY      ESTIM
*****************************************************************************************************
7860 00000 001  00   11101      0000000
7860 00000 002  00   11101      0000001
7860 00000 003  00   11101      0000000
7860 00000 005  00   11101      0000000
7860 00000 008  00   11101      0000000
7860 00000 009  00   11101      0000000
7860 00000 010  00   11101      0000000
7860 00000 011  00   11101      0000000
7860 00000 014  00   11101      0000002
7860 00000 016  00   11101      0000000
7860 00000 017  00   11101      0000002
7860 00000 018  00   11101      0000000
7860 00000 021  00   11101      0000023
7860 00000 022  00   11101      0000000
7860 00000 027  00   11101      0000091

SUBTOTAL
7860                                119

NUMBER OF RECORDS IN THIS CNTY IS    15

 GRAND TOTALS
```

```
 RUN DATE 02/01/80                         SOUTH CAROLINA                                PAGE  10
                                           EIS/AREA SOURCE
                                          QUICK LOOK REPORT

                       PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

 COUN GEOGR CATG DIS- PLT        EMISS
 TY   SUBAL NO.  AGGR CATGY      ESTIM
*****************************************************************************************************
                                 10900

 TOTAL NUMBER OF QUICK LOOK LINES EQUALS   116
```

Figure AST19-2 - continued. Sample Output (Page 6 of 6)

EIS/AS Test 20 - Ad Hoc

Produce a Quick Look Pollutant Summary Report for the Criteria Pollutants

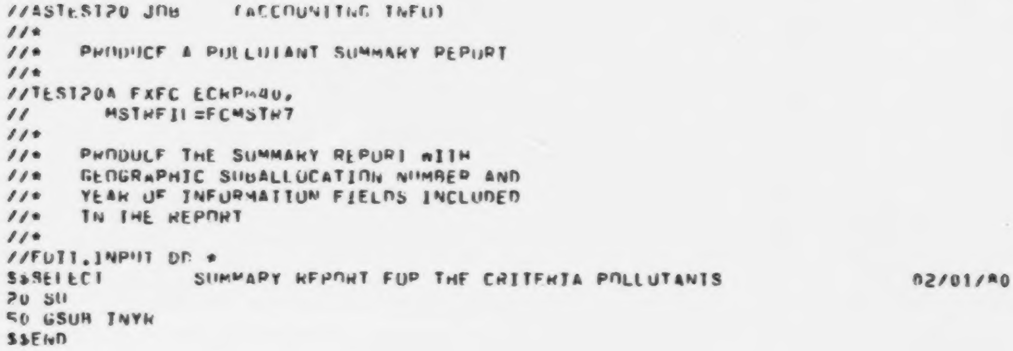
In this test run, a summary report of the criteria pollutant emissions is obtained using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

The user-supplied control cards input to CRTQLED (EC0160) are slightly different from those used to execute a regular quick look report. In a pollutant summary report, the 50-card is the counterpart of the 40-card which is used in a quick look report. See EIS/AS Test 18 for further discussion of the quick look package.

The run stream for this test run contains the JCL needed to execute the quick look package. The purpose of this test run is to obtain a summary report of the criteria pollutant emissions. The criteria pollutants and their associated pollutant codes are: total suspended particulates (11101), carbon monoxide (42101), sulfur dioxide (42401), oxides of nitrogen (42603), and hydrocarbons (43101). The pollutant summary report automatically lists the county, category number, category disaggregate number, and emissions estimates for the criteria pollutants. Additional information may be requested through the use of the 50-card, but the additional information must not be related to a specific pollutant. For this test run, additional information specified on the 50-card includes the geographic suballocation number and the year of the information.

A page break occurs at the county level with subtotals of the emissions estimates printed for each county. A total of emissions estimates for each state is also printed. If the input master file contains information from only one state, then the total emissions for the state will also be the total emissions listed in the report. Since no 10-cards are input to CRTQLED (EC0160) in this test run, all master file category records will be processed for selection. Totaling and page breaks cannot be requested for a pollutant summary report, therefore, no 30-card is submitted in this test run. The run stream for this test run is shown in Figure AST20-1.

A substitutable parameter is used to specify the name of the master file input to CRTQLEX (EC0170). The name of the master file is ECMSTR7 (created in Test 7). The DD (data definition) information for the control cards input to CRTQLED (EC0160) is also supplied. Sample output produced by this test run is shown in Figure AST20-2.



```
//ASTEST20 JOB     (ACCOUNTING INFO)
//*
//*   PRODUCE A POLLUTANT SUMMARY REPORT
//*
//TEST20A EXEC ECRPM40,
//       MSTRFIL=ECMSTR7
//*
//*   PRODUCE THE SUMMARY REPORT WITH
//*   GEOGRAPHIC SUBALLOCATION NUMBER AND
//*   YEAR OF INFORMATION FIELDS INCLUDED
//*   IN THE REPORT
//*
//FOT1.INPUT DD *
$$SELECT         SUMMARY REPORT FOR THE CRITERIA POLLUTANTS              02/01/80
20 SU
50 GSUB INYR
$$END
```

Figure AST20-1. Run Stream

```
*****************************************************************************************************************
     02/01/80                                          EIS/AREA SOURCE RETRIEVAL EDIT REPORT                              PAGE 01
*****************************************************************************************************************
$$SELECT CARD - TITLE          SUMMARY REPORT FOR THE CRITERIA POLLUTANTS

*****************************************************************************************************************


20 CARD  - REPORT FORMAT   SU


30 CARD  - REPORT SEQUENCE              PAGE BREAK
    *COUNTY
    *CATEGORY
             *MASTER FILE SEQUENCE

50 CARD  - SUMMARY DATA ELEMENTS
    *COUNTY
    *CATEGORY
    *DISAGGREGATE
     GEOGRAPHIC SUBALLOCATION
     YEAR OF INFO
             *KEY FIELDS

CRITERIA SUMMARY POLLUTANTS
     TSP
     CO
     SO2
     NOX
     HC
```

Figure AST20-2. Sample Output (Page 1 of 4)

BEST DOCUMENT AVAILABLE

```
PROGRAM NAME: EXTUILX (ECU170)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
                                                                 RETRIEVAL EXTRACT REPORT

    02/01/80                                                      ETS-AREA SOURCE

**************************************************************************************************

    NUMBER OF RECORDS READ               371
    NUMBER OF RECORDS WRITTEN            334

        CONTINUING WITH RETRIEVAL
```

Figure AST20-2 - continued. Sample Output (Page 2 of 4)

```
RUN DATE 02/01/80                                  COLORADO                                     PAGE   1
                                               EIS/AREA SOURCE
                                          POLLUTANT SUMMARY REPORT

                                  SUMMARY REPORT FOR THE CRITERIA POLLUTANTS

COUN CATE DIS  GEOGR INFO                                   TSP          CO          SO2         NOX         HC
TY   GORY AGGR SUBAR YEAR                                   EMISSIONS    EMISSIONS   EMISSIONS   EMISSIONS   EMISSIONS
**************************************************************************************************************************
1280 001  00   00000 79                                            0           0           0           0           0
1280 002  00   00000 79                                           80           6           0          15        1331
1280 003  00   00000 79                                           15           3           6           0         648
1280 004  00   00000 79                                           18           3           0           5         592
1280 005  00   00000 79                                         1830           7          19          69        1566
1280 006  00   00000 79                                            2           0           0           0           3
1280 007  00   00000 79                                          353           7          47          22        1563
1280 008  00   00000 79                                          579          10          76          36        2311
1280 009  00   00000 79                                         1263          12         295         317        2800
1280 010  00   00000 79                                            8           0           1           2          26
1280 011  00   00000 79                                           44           3          26          16         582
1280 012  00   00000 79                                            0           0           0           0           0
1280 013  00   00000 79                                         4385          28         217         412        6567
1280 014  00   00000 79                                           12          35           0           1        8206
1280 015  00   00000 79                                           30           3           5           4         655
1280 016  00   00000 79                                          848           6          97          25        1430
1280 017  00   00000 79                                           48           0           6           3          65
1280 018  00   00000 79                                         1050          16         142          79        3784
1280 019  00   00000 79                                            1           0           0           0           2
1280 020  00   00000 79                                           81           1           6           8         156
1280 999  00   00000                                           10647         140         943        1038       32287
1280 001  00   00001 79                                            0           0           0           0           0
1280 001  01   00001 79                                            0           0           0           0           0
1280 001  35   00001 79                                            0           0           0           0           0
1280 001  99   00001 79                                            0           0           0           0           0
1280 999  00   00001                                               0           0           0           0           0
1280 001  01   00500 79                                            0           0           0           0           0
1280 001  22   00500 79                                            0           0           0           0           0
1280 001  70   00500 79                                            0           0           0           0           0
1280 999  00   00500                                               0           0           0           0           0
1280 999  00   00611                                               0           0           0           0           0
1280 001  99   99999 79                                            0           0           0           0           0
1280 999  00   99999                                               0           0           0           0           0

TOTAL EMISSIONS FOR COUNTY 1280-                               10647         140         943        1038       32287
```

Figure AST20-2 - continued. Sample Output

(Page 3 of 4)

BEST DOCUMENT AVAILABLE

```
RUN DATE 02/01/80                               COLORADO                                    PAGE   2
                                             EIS/AREA SOURCE
                                        POLLUTANT SUMMARY REPORT

                              SUMMARY REPORT FOR THE CRITERIA POLLUTANTS

COUN CATE DIS  GEOGR INFO                              TSP          CO           SO2          NOX          HC
TY   GORY AGGR SUBAL YEAR                              EMISSIONS    EMISSIONS    EMISSIONS    EMISSIONS    EMISSIONS
...........................................................................................................................
2238 023  00   00000 79                                        0            0            0            0            0
2238 047  00   00000 79                                        0            0            0            0            0
2238 060  00   00000 79                                        0            0            0            0            0
2238 999  00   00000                                           4           61            3            0            0

TOTAL EMISSIONS FOR COUNTY 2238-                               0            0            0            0            0

TOTAL EMISSIONS FOR SELECTED RECORDS IN STATE 06           10647          140          943         1038        32287
```

Figure AST20-2 - continued. Sample Output (Page 4 of 4)

EIS/AS Test 21 - Ad Hoc

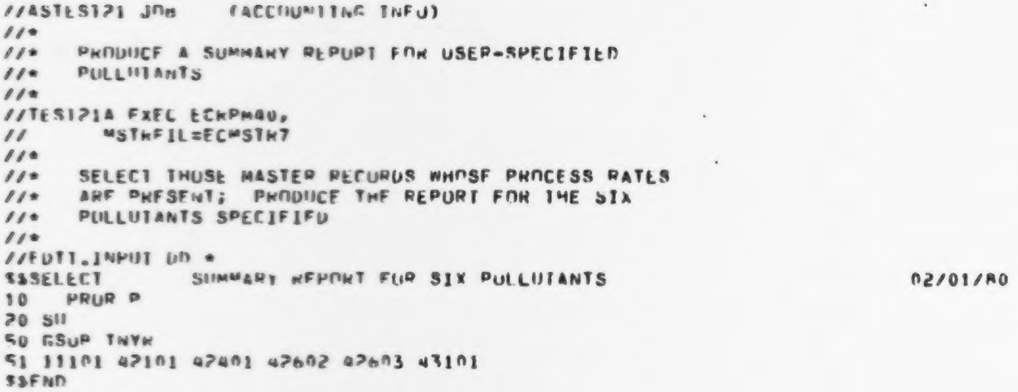
Produce a Quick Look Pollutant Summary Report for Six Pollutants

In this test run, a pollutant summary report for six pollutants is generated using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

The user-supplied control cards input to CRTQLED (EC0160) are similar to those used in EIS/AS Test 20. The major difference is that a 10-card and a 51-card are supplied along with the 20-card and the 50-card. The 10-card is for selection purposes and the 51-card specifies the six pollutants which are to appear in the report. See EIS/AS Test 18 for further discussion of the quick look package.

The run stream for this test run contains the JCL needed to execute the quick look package. The purpose of this test run is to obtain a summary report of the emissions for the six pollutants: total suspended particulates (11101), carbon monoxide (42101), sulfur dioxide (42401), nitrogen dioxide (42602), oxides of nitrogen (42603), and hydrocarbons (43101). These pollutants are specified through the use of the 51-card. A 10-card specifies that any category record selected for the report must have a non-blank process rate. See EIS/AS Test 20 for further discussion of the quick look pollutant summary report. The run stream for this test run is shown in Figure AST21-1.

A substitutable parameter is used to specify the name of the master file input to CRTQLEX (EC0170). The name of the master file is ECMSTR7 (created in Test 7). The DD (data definition) information for the control cards input to CRTQLED (EC0160) is also supplied. Sample output from this procedure is shown in Figure AST21-2.



```
//ASTEST21 JOB    (ACCOUNTING INFO)
//*
//*   PRODUCE A SUMMARY REPORT FOR USER-SPECIFIED
//*   POLLUTANTS
//*
//TEST21A EXEC ECRPM40,
//       MSTRFIL=ECMSTR7
//*
//*   SELECT THOSE MASTER RECORDS WHOSE PROCESS RATES
//*   ARE PRESENT;  PRODUCE THE REPORT FOR THE SIX
//*   POLLUTANTS SPECIFIED
//*
//EDT1.INPUT DD *
$$SELECT        SUMMARY REPORT FOR SIX POLLUTANTS                                  02/01/80
10   PROR P
20 SU
50 GSUP INYR
51 11101 42101 42401 42602 42603 43101
$$END
```

Figure AST21-1. Run Stream

BEST DOCUMENT AVAILABLE

```
**********************************************************************************************************************************
     02/01/80                                      EIS/AREA SOURCE RETRIEVAL EDIT REPORT                                   PAGE 01
**********************************************************************************************************************************

$$SELECT CARD - TITLE           SUMMARY REPORT FOR SIX POLLUTANTS

**********************************************************************************************************************************

10 CARDS - SELECTION CRITERIA

PAREN DATA ELEMENT CONDITION                VALUE        PAREN AND/OR           ERRORS
         PRIOR     PRESENT ANY ENTRY


20 CARD  - REPORT FORMAT   'SU


30 CARD  - REPORT SEQUENCE               PAGE BREAK
    *COUNTY
    *CATEGORY
            *MASTER FILE SEQUENCE

50 CARD  - SUMMARY DATA ELEMENTS
    *COUNTY
    *CATEGORY
    *DISAGGREGATE
     GEOGRAPHIC SUBALLOCATION
     YEAR OF INFO
            *KEY FIELDS

51 CARD  - REQUESTED SUMMARY POLLUTANTS
     TSP
     CO
     SO2
     NOX
     NOX
     HC
```

Figure AST21-2. Sample Output (Page 1 of 4)

BEST DOCUMENT AVAILABLE

```
PROGRAM NAME: CRTWLEX (FC0170)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
                                                         RETRIEVAL EXTRACT REPORT

    02/01/80                                              ETS-AREA SOURCE

**************************************************************************************************************

    NUMBER OF RECORDS READ              371
    NUMBER OF RECORDS WRITTEN           195

        CONTINUING WITH RETRIEVAL
```

Figure AST21-2 - continued. Sample Output (Page 2 of 4)

```
RUN DATE 02/01/80                                  COLORADO                                          PAGE   1
                                               EIS/AREA SOURCE
                                           POLLUTANT SUMMARY REPORT

                                   SUMMARY REPORT FOR SIX POLLUTANTS

COUN CATE DIS  GEOGR INFO                                TSP          CO          SO2          NOX          NOX          HC
TY   GORY AGGR SUBAL YEAR                                EMISSIONS    EMISSIONS   EMISSIONS    EMISSIONS    EMISSIONS    EMISSIONS
.........................................................................................................................................
1280 001  00   00000 79                                        0           0           0            0            0            0
1280 002  00   00000 79                                       80           6           0           19           19         1331
1280 003  00   00000 79                                       15           1           6            0            0          668
1280 004  00   00000 79                                       18           1           0            5            5          592
1280 005  00   00000 79                                     1830           7          19           89           89         1566
1280 006  00   00000 79                                        2           0           0            0            0            3
1280 007  00   00000 79                                      353           7          87           22           22         1563
1280 008  00   00000 79                                      579          10          76           36           36         2311
1280 009  00   00000 79                                     1263          12         295          317          317         2800
1280 010  00   00000 79                                        8           0           1            2            2           26
1280 011  00   00000 79                                       88           3          76           16           16          562
1280 012  00   00000 79                                        0           0           0            0            0            0
1280 013  00   00000 79                                     4385          28         217          412          412         6567
1280 014  00   00000 79                                       12          35           0            1            1         8206
1280 015  00   00000 79                                       30           3           5            4            4          655
1280 016  00   00000 79                                      808           6          97           25           25         1830
1280 017  00   00000 79                                       88           0           6            3            3           65
1280 018  00   00000 79                                     1050          16         182           79           79         3788
1280 019  00   00000 79                                        1           0           0            0            0            2
1280 020  00   00000 79                                       81           1           6            8            8          156
1280 001  00   00001 79                                        0           0           0            0            0            0
1280 001  01   00001 79                                        0           0           0            0            0            0
1280 001  35   00001 79                                        0           0           0            0            0            0
1280 001  99   00001 79                                        0           0           0            0            0            0
1280 001  01   00500 79                                        0           0           0            0            0            0
1280 001  22   00500 79                                        0           0           0            0            0            0
1280 001  70   00500 79                                        0           0           0            0            0            0
1280 001  99   99999 79                                        0           0           0            0            0            0

TOTAL EMISSIONS FOR COUNTY 1280-                           10647         140         983         1038         1038        32287
```

Figure AST21-2 - continued. Sample Output (Page 3 of 4)

```
RUN DATE 02/01/80                                   COLORADO                                            PAGE   2
                                                 EIS/AREA SOURCE
                                            POLLUTANT SUMMARY REPORT

                                 SUMMARY REPORT FOR SIX POLLUTANTS

COUN CATE DIS  GEOGR INFO                              TSP        CO          SO2         NCX         NOX         HC
TY   GORY AGGR SUBAL YEAR                              EMISSIONS  EMISSIONS   EMISSIONS   EMISSIONS   EMISSIONS   EMISSIONS
.........................................................................................................................
2238 023  00   00000 79                                        0           0           0           0           0           0
2238 047  00   00000 79                                        0           0           0           0           0           0

TOTAL EMISSIONS FOR COUNTY 2238-                               0           0           0           0           0           0

TOTAL EMISSIONS FOR SELECTED RECORDS IN STATE 06           10647         140         943        1038        1036       32287
```

Figure AST21-2 - continued. Sample Output (Page 4 of 4)

BEST DOCUMENT AVAILABLE

EIS/AS Test 22 - Ad Hoc

Execute the Retrieval Package and Produce a Quick Look Report from the Answer File

In this test run, the retrieval package is executed using the cataloged procedure ECRTM30 which executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and CRTGENR (EC0100), the generated retrieval program. A quick look report is produced from the answer file using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

Two sets of user-supplied control cards are necessary for this test run. The first set consists of EIS/AS retrieval specification cards which are input to CRTLNGP (EC0090). The second set consists of the quick look control cards which are input to CRTQLED (EC0160). See Test 7 for a discussion of the retrieval package and Test 18 for a discussion of the quick look package.

The run stream for this test run contains the JCL needed to execute the retrieval package and the quick look package. The purpose of this test run is to demonstrate the interactive capabilities of the retrieval and quick look packages. In this test, an answer file (a subset of the master file) is produced using the retrieval package. This answer file is used as the input master file for the quick look package which creates a report from a subset of the answer file. The answer file produced by the retrieval package is cataloged for future use. It contains master file description records that have a year of '75' or greater and a blank population field, description records that have blank year and population fields, and all category records that are subordinate to these description records. Comment records are not selected for inclusion in the answer file.

The quick look report produced from the answer file contains only a subset of the answer file records. The data elements listed in the report include the county, the geographic suballocation number, the category number, the category disaggregate number, the year of information, the pollutant ID, and the emission factor and emissions estimate associated with the pollutant. All emissions estimates are totaled. The run stream for this test run is shown in Figure AST22-1.

Substitutable parameters are used when executing the procedure ECRTM30 to supply the names of the master file input to CRTGENR (EC0100) and the answer file output from CRTGENR (EC0100). The names of these files are ECMSTR7 (created in Test 9) and ECANSR5, respectively. A substitutable parameter is also used to override the disposition of the answer file. The overriding disposition is 'NEW,CATLG,DELETE'.

A substitutable parameter is used when executing the procedure ECRPM40 to supply the name of the master file input to CRTQLEX (EC0170). The name of the file is ECANSR5, the answer file output from CRTGENR (EC0100).

The DD (data definition) information for the retrieval specification cards input to CRTLNGP (EC0090) and the quick look control cards input to CRTQLED (EC0160) is also supplied. Sample output from this test run is shown in Figure AST22-2.

The same quick look report could be produced without the use of the retrieval package, but there would be no answer file to retain for future use. The quick look package produces a temporary file which contains only key information and the data extracted for the report. This temporary file is deleted at the end of the run.

There may be other reasons that require the user to incorporate the retrieval and quick look packages. Suppose the user wishes to produce a quick look report, but the selection criteria involves more than twenty 10-cards which is the maximum for a given report. In most cases, the selection criteria can be divided into subsets. The most comprehensive subset(s) can then be used with the retrieval package to produce an answer file. This answer file can then be input to the quick look package along with the remaining selection criteria to produce the desired report. For example, suppose the selection criteria for a quick look report were as follows:

```
 1.        10   STTE B                              OR
 2.        10 ( YEAR E 75                           AND
 3.        10   CATN G 005                          AND
 4.        10   CATN L 037                          AND
 5.        10   INYR G 78                           AND
 6.        10   PLTC E 11101                        AND
 7.        10   EEST G 0000001                    ) OR
 8.        10 ( YEAR E 77                           AND
 9.        10   CATN G 005                          AND
10.        10   CATN L 037                          AND
11.        10   INYR G 78                           AND
12.        10   PLTC E 11101                        AND
13.        10   EEST G 0000001                    ) OR
14.        10 ( YEAR B                              AND
15.        10   POPN B                              AND
16.        10   RPPC B                              AND
17.        10   CATN G 005                          AND
18.        10   CATN L 037                          AND
19.        10   INYR G 78                           AND
20.        10   PLTC E 11101                        AND
21.        10   EEST G 0000001                    )
```

Execution of the quick look package would be terminated since there are twenty-one 10-cards. The first 10-card specifies that a record is to be selected if the state field is blank, but this will never occur since the state field is part of the key information and will always contain a value. This card is necessary only because the first 10-card should not contain parentheses.

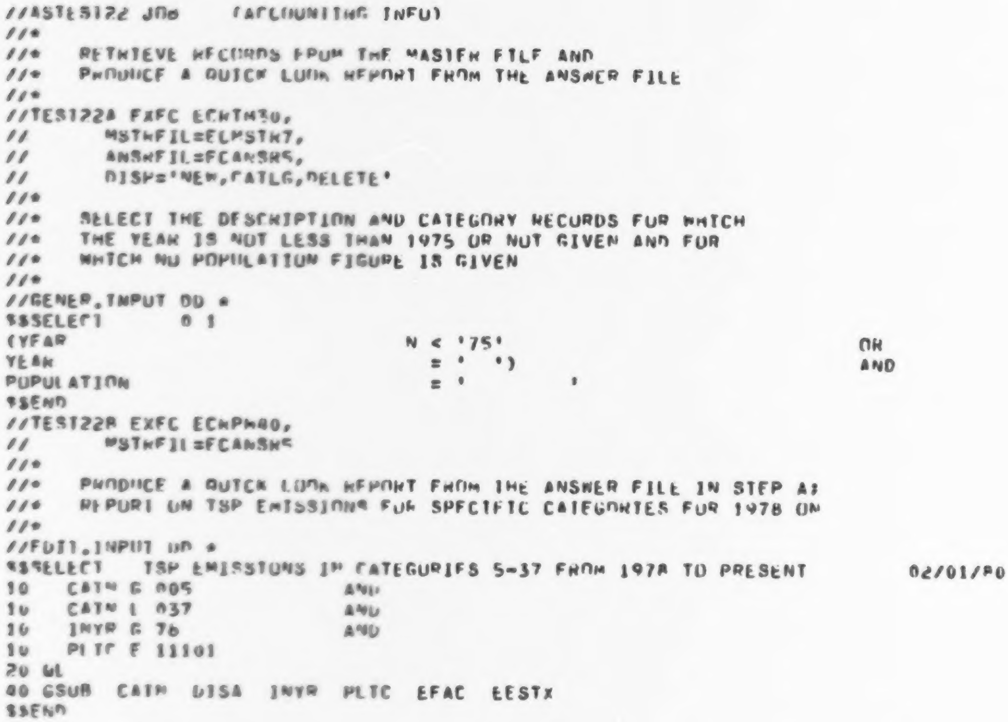
The problem can be solved by dividing the selection criteria into subsets. Since lines 3 through 7, 9 through 13, and 17 through 21 are identical, they can form a subset. These data elements are associated with category records. The remaining data elements (YEAR, POPN, and RPPC) are associated with description records. Since category records are subordinate to description records, the data elements YEAR, POPN, and RPPC will be the comprehensive subset. The retrieval request cards derived from this subset are as follows:

```
$$SELECT             0 1
YEAR                        = '75'                        OR
YEAR                        = '77'                        OR
(YEAR                       = '  '                        AND
POPULATION                  = '       '                   AND
RURAL-POPULATION-PERCENT    = '  '
$$END
```

The number of quick look control cards is reduced significantly. They are as follows:

```
$$SELECT
10   CATN G 005                           AND
10   CATN L 037                           AND
10   INYR G 78                            AND
10   PLTC E 11101                         AND
10   EEST G 0000001
20 QL
.
.
.
$$END
```

Hence, the problem is solved and the user has the option of retaining the answer file created from the retrieval procedure.



```
//ASTEST22 JOB     (ACCOUNTING INFO)
//*
//*    RETRIEVE RECORDS FROM THE MASTER FILE AND
//*    PRODUCE A QUICK LOOK REPORT FROM THE ANSWER FILE
//*
//TEST22A EXEC ECRTM30,
//         MSTRFIL=ECMSTR7,
//         ANSRFIL=ECANSR5,
//         DISP='NEW,CATLG,DELETE'
//*
//*    SELECT THE DESCRIPTION AND CATEGORY RECORDS FOR WHICH
//*    THE YEAR IS NOT LESS THAN 1975 OR NOT GIVEN AND FOR
//*    WHICH NO POPULATION FIGURE IS GIVEN
//*
//GENER.INPUT DD *
$$SELECT       0 1
(YEAR                          N < '75'                          OR
YEAR                             = '  ')                         AND
POPULATION                       = '        '
$$END
//TEST22B EXEC ECRPM40,
//        MSTRFIL=ECANSR5
//*
//*    PRODUCE A QUICK LOOK REPORT FROM THE ANSWER FILE IN STEP A:
//*    REPORT ON TSP EMISSIONS FOR SPECIFIC CATEGORIES FOR 1978 ON
//*
//EDIT.INPUT DD *
$$SELECT    TSP EMISSIONS IN CATEGORIES 5-37 FROM 1978 TO PRESENT        02/01/80
10    CATN G 005            AND
10    CATN L 037            AND
10    INYR G 76             AND
10    PLTC E 11101
20 GL
40 GSUB  CATN  DISA  INYR  PLTC  EFAC  EESTX
$$END
```

Figure AST22-1. Run Stream

```
                         EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                          PAGE      1

PROGRAM NAME: CRTLNGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

INPUT (CONTROL CARDS):
$$SELECT       0 1
(YEAR                          N < '75'                           OR
YEAR                             = '  ')                          AND
POPULATION                       = '          '
$$END

NUMBER OF CONTROL CARDS READ:                     5
NUMBER OF RETRIEVAL SKELETON RECORDS READ:      837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:     916
NUMBER OF CONDITIONAL MESSAGES:                   0
NUMBER OF ABORT MESSAGES:                         0
```

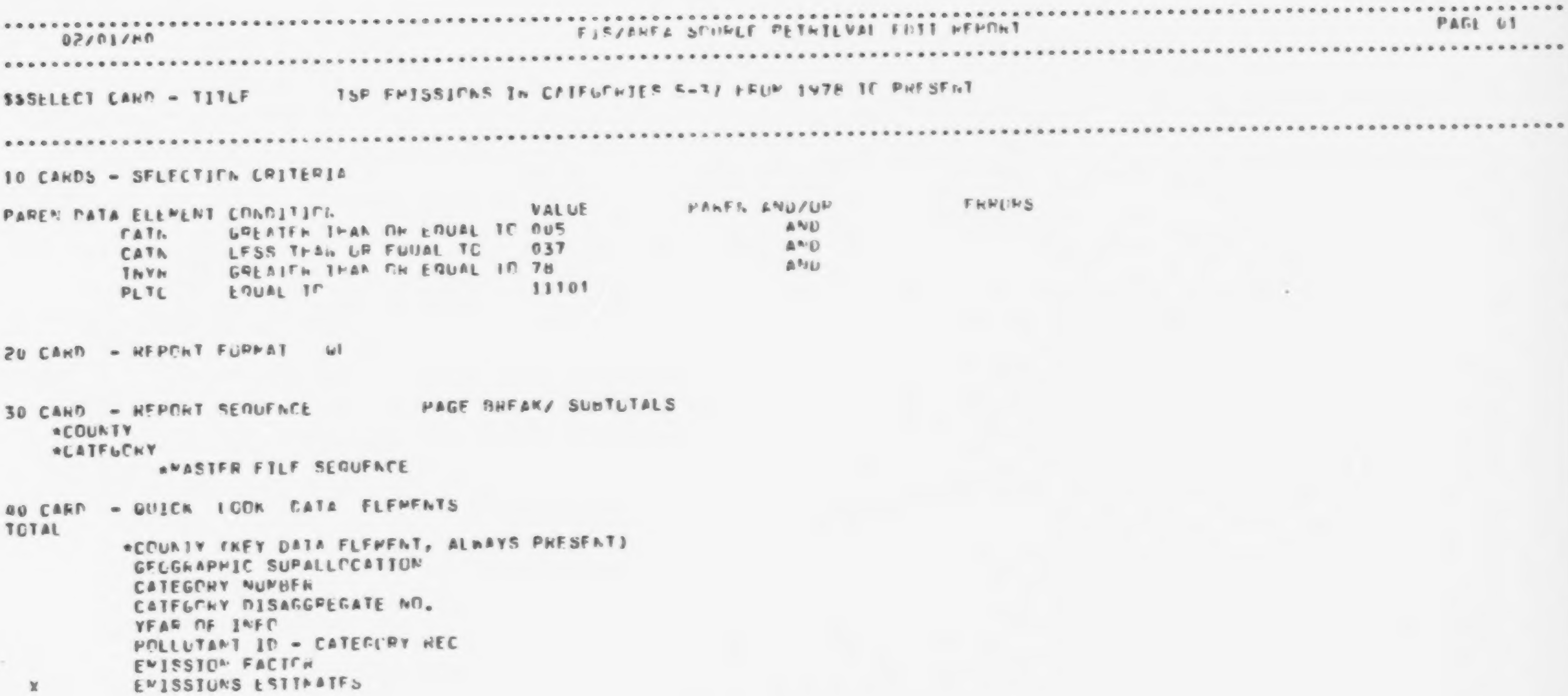
```
                            EIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                            PAGE      1

PROGRAM NAME: CRTGENR (EC0100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF MASTER FILE RECORDS READ:        371
NUMBER OF MASTER FILE RECORDS WRITTEN:     308
NUMBER OF CONDITIONAL MESSAGES:              0
NUMBER OF ABORT MESSAGES:                    0
```

Figure AST22-2. Sample Output

(Page 1 of 4)



```
*****************************************************************************************************************************
     02/01/80                                                   EIS/AREA SOURCE RETRIEVAL EDIT REPORT                                PAGE 01
*****************************************************************************************************************************

$$SELECT CARD - TITLE        TSP EMISSIONS IN CATEGORIES 5-37 FROM 1978 TO PRESENT

*****************************************************************************************************************************

10 CARDS - SELECTION CRITERIA

PAREN DATA ELEMENT CONDITION                   VALUE         PAREN AND/OR            ERRORS
          CATN     GREATER THAN OR EQUAL TO 005                   AND
          CATN     LESS THAN OR EQUAL TO    037                   AND
          INYR     GREATER THAN OR EQUAL TO 78                    AND
          PLTC     EQUAL TO                 11101


20 CARD  - REPORT FORMAT   W1


30 CARD  - REPORT SEQUENCE          PAGE BREAK/ SUBTOTALS
    *COUNTY
    *CATEGORY
          *MASTER FILE SEQUENCE

40 CARD  - QUICK  LOOK  DATA  ELEMENTS
TOTAL
          *COUNTY (KEY DATA ELEMENT, ALWAYS PRESENT)
           GEOGRAPHIC SUBALLOCATION
           CATEGORY NUMBER
           CATEGORY DISAGGREGATE NO.
           YEAR OF INFO
           POLLUTANT ID - CATEGORY REC
           EMISSION FACTOR
  X        EMISSIONS ESTIMATES
```

Figure AST22-2 - continued. Sample Output (Page 2 of 4)

```
PROGRAM NAME: CRTQLEX (EF0170)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

                                                    RETRIEVAL EXTRACT REPORT

     02/01/80                                        EIS-AREA SOURCE

.......................................................................................

     NUMBER OF RECORDS READ                308
     NUMBER OF RECORDS WRITTEN              17

          CONTINUING WITH RETRIEVAL
```

Figure AST22-2 - continued. Sample Output (Page 3 of 4)

```
RUN DATE 02/01/80                                   COLORADO                                          PAGE    1
                                                EIS/AREA SOURCE
                                               QUICK LOOK REPORT

                                TSP EMISSIONS IN CATEGORIES 5-37 FROM 1978 TO PRESENT

COUN GEOGR CATG DIS- INFO PLT   EMISSION         EMISS
TY   SUBAL NO.  AGGR YEAR CATGY FACTOR           ESTIM
.....................................................................................................
1280 00000 005  00   79   11101 0000007.000      0001830
1280 00000 006  00   79   11101 0000002.000      0000002
1280 00000 007  00   79   11101 0000001.000      0000353
1280 00000 008  00   79   11101 0000001.000      0000579
1280 00000 009  00   79   11101 0000001.000      0001263
1280 00000 010  00   79   11101 0000001.000      0000008
1280 00000 011  00   79   11101 0000001.000      0000044
1280 00000 012  00   79   11101 0000001.000      0000000
1280 00000 013  00   79   11101 0000001.000      0004385
1280 00000 014  00   79   11101 0000001.000      0000012
1280 00000 015  00   79   11101 0000001.000      0000030
1280 00000 016  00   79   11101 0000001.000      0000848
1280 00000 017  00   79   11101 0000001.000      0000048
1280 00000 018  00   79   11101 0000001.000      0001050
1280 00000 019  00   79   11101 0000001.000      0000001
1280 00000 020  00   79   11101 0000001.000      0000081
2238 00000 023  00   79   11101 0000008.000      0000000

 GRAND TOTALS
                                                  10534


TOTAL NUMBER OF QUICK LOOK LINES EQUALS    17
```

Figure AST22-2 - continued. Sample Output (Page 4 of 4)

EIS/AS Test 23 - Ad Hoc

Execute the Retrieval Package and Produce a Batched Answer File and a Detailed Report of the File

In this test run, a batch retrieval is executed using the cataloged procedure ECRTM30 which executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and CRTGENR (EC0100), the generated retrieval program. The answer file output from CRTGENR (EC0100) is sorted using the cataloged procedure ECSRM10 which executes CSRMSTR (EC0110), the master file sort program. A detailed list of the sorted file output from CSRMSTR (EC0110) is produced using the cataloged procedure ECRPM20 which executes CRPMSTR (EC0130), the master file detailed report program.

The user-supplied retrieval request cards input to CRTLNGP (EC0090) are divided into groups which are called batches. Each batch is separated from the preceding batch by a $$SELECT card and is supplied with a sequence number by CRTLNGP (EC0090). When CRTGENR (EC0100) selects a master file record, this sequence number is inserted in the record to indicate the batch in which the record qualifies. The input master file records are compared with each batch of retrieval criteria, therefore a record may be selected more than once. The resulting answer file is sorted into batch number sequence by CSRMSTR (EC0110). The user must supply an option card to CSRMSTR (EC0110) specifying that a BATCH sort is to be performed. The sorted answer file is printed in a detailed report by CRPMSTR (EC0130). The batch number will appear in the upper right corner of each page of the detailed report. The report may not be in master file sequence since the input answer file is sorted in batch number sequence. An option card is supplied as input to CRPMSTR (EC0130) to indicate the maximum number of printed lines per page in the detailed report. Test 7 provides a discussion of the retrieval package and CRPMSTR (EC0130); Test 10 contains a discussion of CSRMSTR (EC0110).

The run stream for this test run contains the JCL needed to execute the retrieval package, the master file sort program, and the master file detailed report program. There are three batches designated in the retrieval request cards. The first $$SELECT card specifies that both description and category records are to be retrieved. Information contained on any succeeding $$SELECT card will be ignored. The run stream for this test run is shown in Figure AST23-1.

Substitutable parameters are used when executing the procedure ECRTM30 to supply the names of the master file input to CRTGENR (EC0100) and the answer file output from CRTGENR (EC0100). The names of these files are ECMSTR7 (created in Test 9) and ECANSR6, respectively.

Substitutable parameters are used when executing the procedure ECSRM10 to supply the names of the master file input to CSRMSTR (EC0110) and the sorted master file output from CSRMSTR (EC0110). The names of these files are ECANSR6 and ECANSR7, respectively.

A substitutable parameter is used when executing ECRPM20 to supply the name of the master file input to CRPMSTR (EC0130). The name of this file is ECANSR7.

The DD (data definition) information for the retrieval specification cards input to CRTLNGP (EC0090), the option card input to CSRMSTR (EC0110), and the option card input to CRPMSTR (EC0130) is also supplied. Sample output from this test run is shown in Figure AST23-2.

```
//ASTEST23 JOB    (ACCOUNTING INFO)
//*
//*   PERFORM A BATCH RETRIEVAL AND PRODUCE A
//*   DETAILED REPORT FROM THE SORTED ANSWER FILE
//*
//TEST23A EXEC ECRTM30,
//        MSTRFIL=ECMSTR7,
//        ANSRFIL=ECANSR6
//*
//*   RETRIEVE THREE BATCHES OF RECORDS BASED ON THE
//*   FOLLOWING COUNTY AND SUBALLOCATION RESTRICTIONS:
//*   (1)  A POSITIVE RURAL POPULATION PERCENTAGE LESS
//*        THAN 40 % WITH A TOTAL POPULATION LESS THAN
//*        50,000
//*   (2)  A RURAL POPULATION PERCENTAGE GREATER THAN
//*        40% WITH A NON-BLANK POPULATION FIGURE
//*   (3)  A TOTAL POPULATION GREATER THAN 100,000
//*
//GENER.INPUT DD *
$$SELECT        0 1
RURAL-POPULATION-PERCENT          > '00'                              AND
RURAL-POPULATION-PERCENT          < '40'                              AND
POPULATION                        < '00050000'
$$SELECT
RURAL-POPULATION-PERCENT          > '40'                              AND
POPULATION                      N = '        '
$$SELECT
POPULATION                        > '00100000'
$$END
//TEST23B EXEC ECSRM10,
//        OLDMSTR=ECANSR6,
//        NEWMSTR=ECANSR7
//*
//*   SORT THE ANSWER FILE FROM STEP A USING THE
//*   BATCH OPTION
//*
//SORT.OPTIONS DD *
BATCH
//TEST23C EXEC ECRPR20,
//        MSTRFIL=ECANSR7
//*
//*   PRODUCE A DETAILED REPORT OF THE SORTED
//*   ANSWER FILE FROM STEP B
//*
//LIST.OPTIONS DD *
60
```

Figure AST23-1. Run Stream

```
                     EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                     PAGE    1

PROGRAM NAME: CHTLNGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

INPUT (CONTROL CARDS):
$$SELECT        0 1
RURAL-POPULATION-PERCENT          > '00'                    AND
RURAL-POPULATION-PERCENT          < '40'                    AND
POPULATION                        < '00050000'
$$SELECT
RURAL-POPULATION-PERCENT          > '40'                    AND
POPULATION                      N = '        '
$$SELECT
POPULATION                        > '00100000'
$$END

NUMBER OF CONTROL CARDS READ:                    10
NUMBER OF RETRIEVAL SKELETON RECORDS READ:      837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:     986
NUMBER OF CONDITIONAL MESSAGES:                   0
NUMBER OF ABORT MESSAGES:                         0

-------------------------------------------------------------------------------------------------

                        EIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                   PAGE    1

PROGRAM NAME: CHTGENR (EC0100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF MASTER FILE RECORDS READ:       371
NUMBER OF MASTER FILE RECORDS WRITTEN:      9
NUMBER OF CONDITIONAL MESSAGES:             0
NUMBER OF ABORT MESSAGES:                   0
```

Figure AST23-2. Sample Output

(Page 1 of 3)

```
                                   FTS/AS MASTER FILE SORT PROGRAM  -  DIAGNOSTIC REPORT                          PAGE

PROGRAM NAME: CSPMSTR (EC0110)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

SORT OPTION SPECIFIED: BATCH


NUMBER OF RECORDS READ:                  9
NUMBER OF RECORDS WRITTEN:               9
NUMBER OF DIAGNOSTIC MESSAGES:           0
```

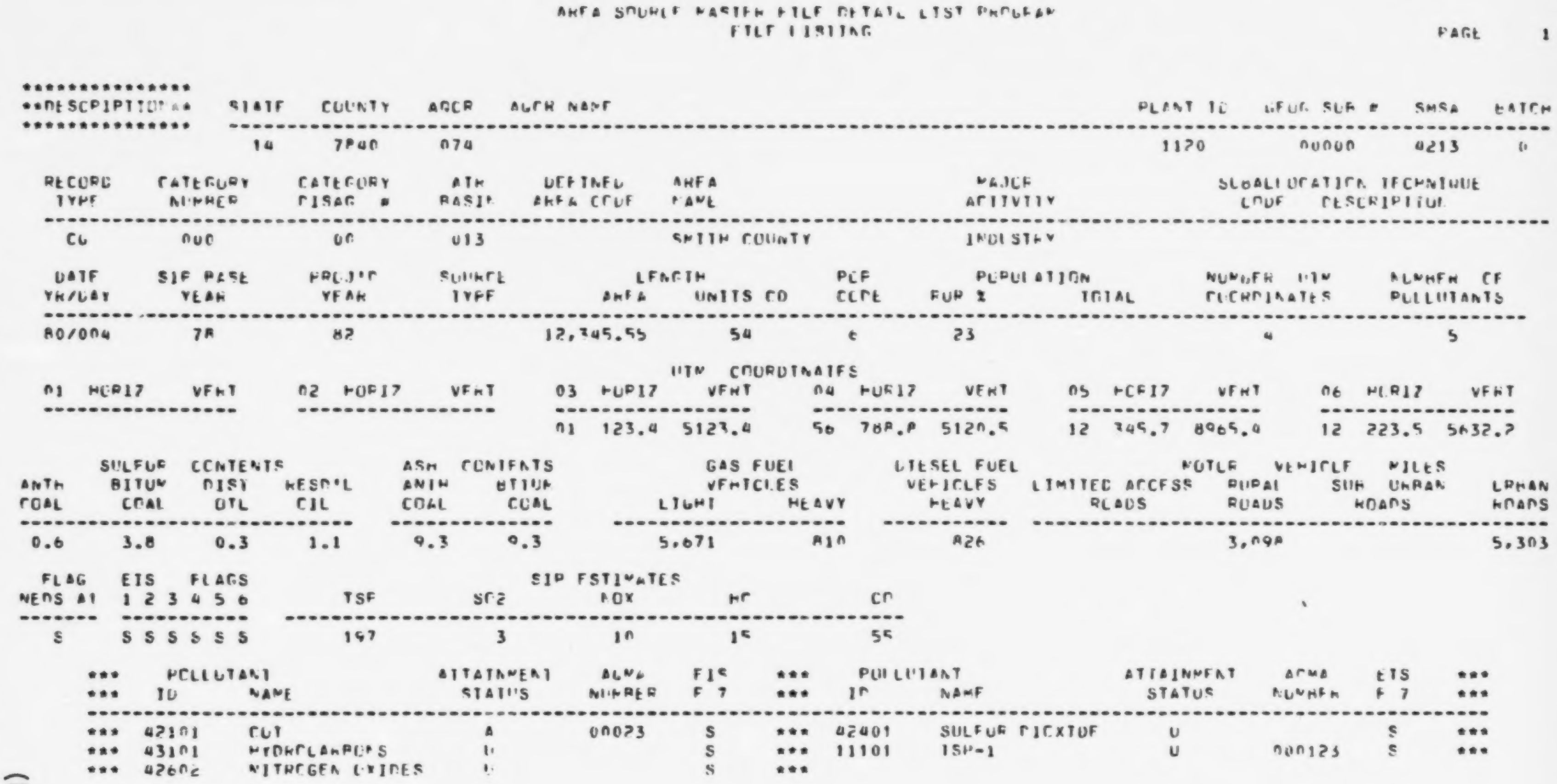
```
                                          AREA SOURCE MASTER FILE DETAIL LIST PROGRAM                              PAGE
                                                      DIAGNOSTIC REPORT

PROGRAM NAME: CHPMSTR (EC0130)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION IN EFFECT: 60 LINES PER PAGE MAXIMUM


NUMBER OF RECORDS READ:                     9
NUMBER OF DESCRIPTION RECORDS:              9
NUMBER OF CATEGORY RECORDS:                 0
NUMBER OF COMMENT RECORDS:                  0
```

Figure AST23-2 - continued. Sample Output
(Page 2 of 3)



```
                                                AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                               FILE LISTING                                                     PAGE    1

***************
**DESCRIPTION**    STATE   COUNTY   AQCR  AQCR NAME                                                 PLANT ID   GEOG SUB #    SMSA   BATCH
***************    ----------------------------------------------------------------------------------------------------------------------
                     14     7840     074                                                              1120        00000      0213     0

  RECORD    CATEGORY     CATEGORY      ATR     DEFINED    AREA                        MAJOR                    SUBALLOCATION TECHNIQUE
   TYPE      NUMBER      DISAG  #     BASIS   AREA CODE   NAME                       ACTIVITY                    CODE   DESCRIPTION
  -----------------------------------------------------------------------------------------------------------------------------------
    CO        000          00          013                SMITH COUNTY               INDUSTRY

   DATE     SIP BASE      PROJ'D      SOURCE           LENGTH           PCF         POPULATION             NUMBER  UTM      NUMBER  OF
  YR/DAY      YEAR         YEAR        TYPE          AREA    UNITS CO   CODE    PUP %          TOTAL       COORDINATES      POLLUTANTS
  ---------------------------------------------------------------------------------------------------------------------------------
  80/004      78           82                  12,345.55        54        C       23                            4                5

                                                          UTM  COORDINATES
  01  HORIZ       VERT      02  HORIZ       VERT      03  HORIZ       VERT      04  HORIZ       VERT      05  HORIZ       VERT      06  HORIZ       VERT
  -----------------       -----------------       -----------------       -----------------       -----------------       -----------------
                                                  01  123.4  5123.4     56  788.8  5120.5     12  345.7  8965.4     12  223.5  5632.2

       SULFUR  CONTENTS               ASH  CONTENTS               GAS FUEL          DIESEL FUEL              MOTOR   VEHICLE   MILES
ANTH    BITUM    DIST    RESID'L     ANTH      BTIUM                VEHICLES           VEHICLES   LIMITED ACCESS   RURAL     SUB  URBAN      URBAN
COAL     COAL     DTL     OIL        COAL       COAL           LIGHT        HEAVY        HEAVY          ROADS         ROADS        ROADS       ROADS
-----------------------------       --------------     ---------------------   -----------   ----------------------------------------------
 0.6     3.8      0.3     1.1         9.3        9.3           5,671         810          826                         3,098                  5,303

  FLAG    EIS    FLAGS                        SIP ESTIMATES
NEDS AT  1 2 3 4 5 6          TSP        SO2         NOX        HC           CO
-------  -----------    -------------------------------------------------------
   S     S S S S S S          197          3          10         15           55

      ***    POLLUTANT                ATTAINMENT    AQMA     EIS      ***    POLLUTANT                 ATTAINMENT     AQMA     EIS      ***
      ***   ID        NAME              STATUS     NUMBER    F 7      ***    ID      NAME                STATUS      NUMBER    F 7      ***
      ----------------------------------------------------------------------------------------------------------------------------------
      ***   42101     COT                 A        00023      S       ***   42401   SULFUR DIOXIDE         U                     S       ***
      ***   43101     HYDROCARBONS        U                   S       ***   11101   TSP-1                  U         000123      S       ***
      ***   42602     NITROGEN OXIDES     U                   S       ***
```

Figure AST23-2 - continued. Sample Output (Page 3 of 3)

BEST DOCUMENT AVAILABLE

261

EIS/AS Test 24 - Ad Hoc

Create the Official NADB Emission Factor File and Produce a Detailed Report

In this test run, the official NADB area source emission factor file is created from EIS/AS emission factor file transactions using the cataloged procedure ECEME10. This procedure executes CSREFTR (EC0010), the emission factor file transaction sort program; and CEMEFAC (EC0020), the emission factor file edit-maintenance program. The file output from CEMEFAC (EC0020) is listed in a detailed report using the cataloged procedure ECRPE10 which executes CRPEFAC (EC0150), the emission factor file detailed report program.

The transactions input to CSREFTR (EC0010) must be in EIS/AS emission factor file transaction format. An option card must be supplied as input to CEMEFAC (EC0020) specifying a control date, a warning message option (optional), and a list option (optional). Also, a dummy file must be specified as input to CEMEFAC (EC0020) since this is a file creation run. See EIS/AS Test 1 for a discussion of CSREFTR (EC0010), CEMEFAC (EC0020), and CRPEFAC (EC0150).

The run stream for this test run contains the JCL needed to execute the emission factor file maintenance and detailed report procedures. The purpose of this test run is to create the official NADB emission factor file which will be used in live runs of the EIS/AS system. It is suggested that the user keep a backup of this file in the event that the original file is inadvertently deleted. The run stream for this test run is shown in Figure AST24-1.

Substitutable parameters are used to supply the name of the emission factor file output from CEMEFAC (EC0020) and input to CRPEFAC (EC0150). The name of this file is NADBEMF. The DD (data definition) information for the transactions input to CSREFTR (EC0010) and the option card input to CEMEFAC (EC0020) is also supplied. Sample output from this test run is shown in Figure AST24-2.

```
//ASTEST24 JOB     (ACCOUNTING INFO)
//*
//*    CREATE THE OFFICIAL NADB EMISSION FACTOR
//*    FILE AND LIST IT
//*
//TEST24A EXEC ECEMEIU,
//         NEWEMFC=NADBEMF
//*
//*    USE FIS/AS EMISSION FACTOR TRANSACTIONS TO GENERATE
//*    THE OFFICIAL FILE
//*
//SORT.INPUT DD *
0000000000000100           78179             RESIDENT ANTHRACITE COAL                 1A
0000000000000100F 11101800500000010000 SUSPENDED PART.                                3A
0000000000000100F 42101781790000090000 CARBON MONOXIDE                                3A
0000000000000100F 42401800500000038000 SULFER DIOXIDES                                3A
0000000000000100F 42602800560000003000    N  OXIDES                                   3A
0000000000000100F 43101800500000002500 TOTAL HY CARBON                                3A
0000000000000200           78179             RESIDENT BITUMINOUS COAL                 1A
0000000000000200F 11101781790000020000 SUSPENDED PART.                                3A
0000000000000200F 42101800500000090000 CARBON MONOXIDE                                3A
0000000000000200F 42401800500000038000 SULFER DIOXIDE                                 3A
0000000000000200F 42602800500000003000    N  OXIDES                                   3A
0000000000000200F 43101781790000020000 TOTAL HY CARBON                                3A
0000000000000300           78179             RESIDENT DISTILLATE OIL                  1A
0000000000000300F 11101800500000002500 SUSPENDED PART.                                3A
0000000000000300F 42101800500000005000 CARBON MONOXIDE                                3A
0000000000000300F 42401800500000144000 SULFUR DIOXIDE                                 3A
0000000000000300F 42602800500000018000    N  OXIDES                                   3A
0000000000000300F 43101800500000001000 TOTAL HY CARBON                                3A
0000000000000400           78179             RESIDENTIAL RESIDUAL OIL                 1A
0000000000000400F 11101800500000016900 SUSPENDED PART.                                3A
0000000000000400F 42101800500000005000 CARBON MONOXIDE                                3A
0000000000000400F 42401800500000159000 SULFUR DIOXIDE                                 3A
0000000000000400F 42602800500000018000    N  OXIDES                                   3A
0000000000000400F 43101800500000001000 TOTAL HY CARBON                                3A
```

(Remainder of transactions omitted)

```
//UPDATE.ECSOLFF DD DUMMY
//UPDATE.OPTIONS DD *
P0001
//TEST24B EXEC ECRPEIU,
//         EMFCFIL=NADBEMF
//*
//*    LIST THE OFFICIAL FILE GENERATED IN STEP A
//*
```

Figure AST24-1. Run Stream

```
                    EIS/AS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: CSREFTR (EC0010)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS:                                384
NUMBER OF OUTPUT TRANSACTIONS:                               385
```

```
--------------------------------------------------------------------------------------------------
```

```
                    EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                PAGE    1

PROGRAM NAME: CEMEFAC (EC0020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTION CARD

   CONTROL DATE IS 80001,  ERROR OPTION IS NOFLAGW,  LIST OPTION IS NOLIST



NUMBER OF TRANSACTIONS READ:                                385
NUMBER OF ERRORS DETECTED:                                    0
NUMBER OF WARNINGS DETECTED:                                  0
NUMBER OF TRANSACTIONS REJECTED:                              0
NUMBER OF EMISSION FACTOR FILE RECORDS READ:                  0
NUMBER OF EMISSION FACTOR FILE RECORDS WRITTEN:             385
```

Figure AST24-2. Sample Output

(Page 1 of 3)

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                 EIS/AS EMISSION FACTOR FILE DETAILED REPORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE      1

PROGRAM NAME: CHPEFAC (EC0150)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


EMISSION FACTOR FILE RECORD COUNT:       385
NUMBER OF CATEGORIES IN LIST:             64
NUMBER OF POLLUTANT ENTRIES IN LIST:     320
   FEDERAL POLLUTANT ENTRIES:            320
   STATE POLLUTANT ENTRIES:                0
   LOCAL POLLUTANT ENTRIES:                0
NUMBER OF ERRORS:                          0
NUMBER OF PAGES IN REPORT:                11
```

Figure AST24-2 - continued. Sample Output
(Page 2 of 3)

```
                                        EIS/AS EMISSION FACTOR FILE DETAILED REPORT                                PAGE      1

STATE     COUNTY                           SUBALLOC    DISAG      CATEGORY                           CAT DATE      FLAGS/CONTENTS %'S
        CODE  NAME                         NUMBER        #      NUMBER      DESCRIPTION                YY  DDD   NIT       SUL       ASH
--------------------------------------------------------------------------------------------------------------------------------------

                                        EMF DATE        POLLUTANT                                       EMISSION      CONF        POLLUTANT
                                          YY  DDD      ID        NAME                ORIG    SOURCE       FACTOR      LEVEL       SPEC DATA
                                        ----------------------------------------------------------------------------------------------

 00     0000                             00000        00 -     001     RESIDENT ANTHRACITE COAL     78   179
                                          80  050     11101     SUSPENDED PART.    FEDERAL                    10.000     0
                                          78  179     42101     CARBON MONOXIDE    FEDERAL                    90.000     0
                                          80  050     42401     SULFER DIOXIDES    FEDERAL                    38.000     0
                                          80  050     42602       N  OXIDES        FEDERAL                     3.000     0
                                          80  050     43101     TOTAL HY CARBON    FEDERAL                     2.500     0

 00     0000                             00000        00       002     RESIDENT BITUMINOUS COAL     78   179
                                          78  179     11101     SUSPENDED PART.    FEDERAL                    20.000     0
                                          80  050     42101     CARBON MONOXIDE    FEDERAL                    90.000     0
                                          80  050     42401     SULFER DIOXIDE     FEDERAL                    38.000     0
                                          80  050     42602       N  OXIDES        FEDERAL                     3.000     0
                                          78  179     43101     TOTAL HY CARBON    FEDERAL                    20.000     0

 00     0000                             00000        00       003     RESIDENT DISTILLATE OIL      78   179
                                          80  050     11101     SUSPENDED PART.    FEDERAL                     2.500     0
                                          80  050     42101     CARBON MONOXIDE    FEDERAL                     5.000     0
                                          80  050     42401     SULFUR DIOXIDE     FEDERAL                   144.000     0
                                          80  050     42602       N  OXIDES        FEDERAL                    18.000     0
                                          80  050     43101     TOTAL HY CARBON    FEDERAL                     1.000     0

 00     0000                             00000        00       004     RESIDENTIAL RESIDUAL OIL     78   179
                                          80  050     11101     SUSPENDED PART.    FEDERAL                    16.900     0
                                          80  050     42101     CARBON MONOXIDE    FEDERAL                     5.000     0
                                          80  050     42401     SULFUR DIOXIDE     FEDERAL                   159.000     0
                                          80  050     42602       N  OXIDES        FEDERAL                    18.000     0
                                          80  050     43101     TOTAL HY CARBON    FEDERAL                     1.000     0

 00     0000                             00000        00       005     RESIDENTIAL NATURAL GAS      78   179
                                          78  179     11101     SUSPENDED PART.    FEDERAL                    10.000     0
                                          80  050     42101     CARBON MONOXIDE    FEDERAL                    20.000     0
                                          80  050     42401     SULFUR DIOXIDE     FEDERAL                     0.600     0
                                          80  050     42602       N  OXIDES        FEDERAL                    80.000     0
                                          80  050     43101     TOTAL HY CARBON    FEDERAL                     8.000     0

 00     0000                             00000        00       006     RESIDENTIAL WOOD             78   179
                                          78  179     11101     SUSPENDED PART.    FEDERAL                    25.000     0
                                          80  050     42101     CARBON MONOXIDE    FEDERAL                   150.000     0
                                          80  050     42401     SULFUR DIOXIDE     FEDERAL                     0.500     0
                                          80  050     42602       N  OXIDES        FEDERAL                     1.000     0
                                          80  050     43101     TOTAL HY CARBON    FEDERAL                     6.000     0
```

Figure AST24-2 - continued. Sample Output (Page 3 of 3)

APPENDIX A

CROSS-REFERENCE OF TESTS, PROCEDURES, AND PROGRAMS

Test	Procedures	Programs
1	ECEME10	CSREFTR (EC0010) CEMEFAC (EC0020)
	ECRPE10	CRPEFAC (EC0150)
2	ECFMM20	CCENETR (EC0030) CSRINTR (EC0050) CMSEFIN (EC0060) CFMMSTR (EC0070)
3	ECEMM10	CEDMSTR (EC0040) CSRINTR (EC0050) CMSEFIN (EC0060) CFMMSTR (EC0070)
4	ECRPM30	CRPDUMP (EC0140)
5	ECEDT10	CEDMSTR (EC0040)
	ECMST10	CSRINTR (EC0050) CMSEFIN (EC0060)
	ECFMM10	CSRINTR (EC0050) CFMMSTR (EC0070)
6	ECRPM10	CRPASNA (EC0120)
7	ECRTM30	CRTLNGP (EC0090) CRTGENR (EC0100)
	ECRPM20	CRPMSTR (EC0130)
8	ECRPM10	CRPASNA (EC0120)

Test	Procedures	Programs
9	ECFMM30	CMSEFGN (EC0080)
		CSRINTR (EC0050)
		CFMMSTR (EC0070)
10	ECRTM10	CRTLNGP (EC0090)
	ECRTM20	CRTGENR (EC0100)
	ECSRM10	CSRMSTR (EC0110)
	ECRPM30	CRPDUMP (EC0140)
11	ECEME10	CSREFTR (EC0010)
		CEMEFAC (EC0020)
12	ECEDT10	CEDMSTR (EC0040)
13	ECCET10	CCENETR (EC0030)
14	ECMSM10	CMSEFGN (EC0080)
15	ECMST10	CSRINTR (EC0050)
		CMSEFIN (EC0060)
16	ECRTM30	CRTLNGP (EC0090)
		CRTGENR (EC0100)
	ECRPM30	CRPDUMP (EC0140)
17	ECRTM30	CRTLNGP (EC0090)
		CRTGENR (EC0100)
	ECRPM20	CRPMSTR (EC0130)
18	ECRPM40	CRTQLED (EC0160)
		CRTQLEX (EC0170)
		CRPQUIK (EC0180)
19	ECRPM40	CRTQLED (EC0160)
		CRTQLEX (EC0170)
		CRPQUIK (EC0180)

Test	Procedures	Programs
20	ECRPM40	CRTQLED (EC0160)
		CRTQLEX (EC0170)
		CRPQUIK (EC0180)
21	ECRPM40	CRTQLED (EC0160)
		CRTQLEX (EC0170)
		CRPQUIK (EC0180)
22	ECRTM30	CRTLNGP (EC0090)
		CRTGENR (EC0100)
	ECRTM40	CRTQLED (EC0160)
		CRTQLEX (EC0170)
		CRPQUIK (EC0180)
23	ECRTM30	CRTLNGP (EC0090)
		CRTGENR (EC0100)
	ECSRM10	CSRMSTR (EC0110)
	ECRPM20	CRPMSTR (EC0130)
24	ECEME10	CSREFTR (EC0010)
		CEMEFAC (EC0020)
	ECRPE10	CRPEFAC (EC0150)

Procedure	EIS/AS Tests
ECCET10	13
ECEDT10	5, 12
ECEME10	1, 11, 24
ECEMM10	3
ECFMM10	5
ECFMM20	2
ECFMM30	9
ECMSM10	14
ECMST10	5, 15
ECRPE10	1, 24
ECRPM10	6, 8
ECRPM20	7, 17, 23
ECRPM30	4, 10, 16
ECRPM40	18, 19, 20, 21, 22
ECRTM10	10
ECRTM20	10
ECRTM30	7, 16, 17, 22, 23
ECSRM10	10, 23

Program	EIS/AS Tests
CCENETR (EC0030)	2, 13
CEDMSTR (EC0040)	3, 5, 12
CEMEFAC (EC0020)	1, 11, 24
CFMMSTR (EC0070)	2, 3, 5, 9
CMSEFGN (EC0080)	9, 14
CMSEFIN (EC0060)	2, 3, 5, 15
CRPASNA (EC0120)	6, 8
CRPDUMP (EC0140)	4, 10, 16
CRPEFAC (EC0150)	1, 24
CRPMSTR (EC0130)	7, 17, 23
CRPQUIK (EC0180)	18, 19, 20, 21, 22
CRTGENR (EC0100)	7, 10, 16, 17, 22, 23
CRTLNGP (EC0090)	7, 10, 16, 17, 22, 23
CRTQLED (EC0160)	18, 19, 20, 21, 22
CRTQLEX (EC0170)	18, 19, 20, 21, 22
CSREFTR (EC0010)	1, 11, 24
CSRINTR (EC0050)	2, 3, 5, 9, 15
CSRMSTR (EC0110)	10, 23

TECHNICAL REPORT DATA

(Please read Instructions on the reverse before completing)

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15. SUPPLEMENTARY NOTES

16. ABSTRACT

This manual documents the EIS/AS test run series released by the Environmental Protection Agency. The test run series is divided into two major areas: basic test runs and ad hoc test runs. The basic test runs exercise each program in EIS/AS at least once and provide the user with a means of determining whether or not his installation of EIS/AS has been successful.

The ad hoc test runs further exercise the capabilites of the EIS/AS programs. The ad hoc test runs also provide the user with examples of how various combinations of EIS/AS programs may be used to generate certain reports or to accomplish special tasks. Any programs added to the original EIS/AS system are exercised by ad hoc test runs.

The EIS/AS User's Guide should be used as a reference in conjunction with this manual. Appendix A of this manual provides a cross-reference of tests, procedures, and programs.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Computer Programs	CDHS	
Computer Software	EIS/AS	
Data Processing	NEDS	
Air Pollution	Atmospheric Pollution	
Data Handling	System Installation	
Computer System Programs	System Testing	
Data Base Management System		
Distributed Processing		

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